

ECONOMIC POLICY AND GROWTH of Central and East European Countries

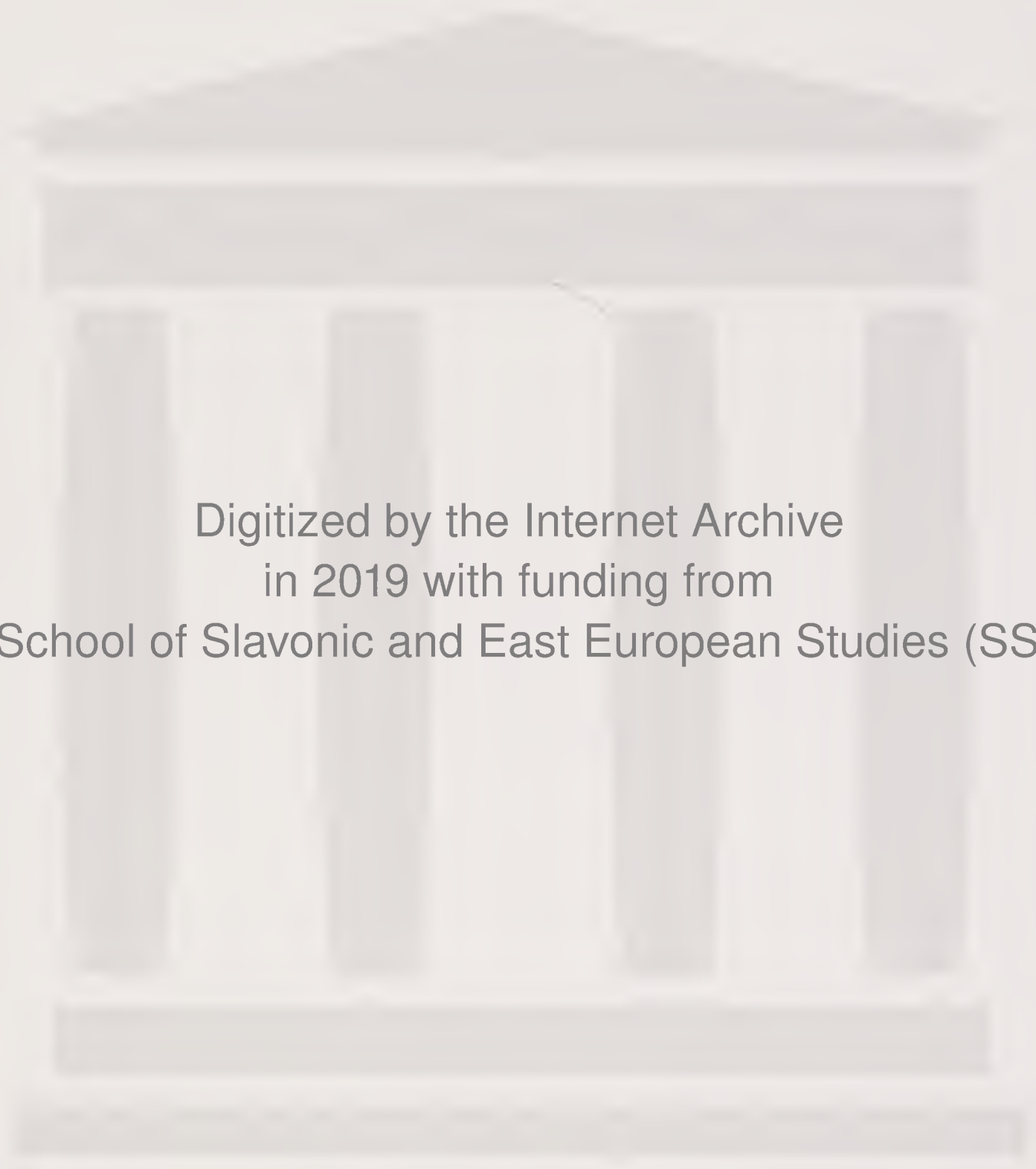


edited by

Krzysztof Piech

School of Slavonic and East European Studies
University College London

London 2003



Digitized by the Internet Archive
in 2019 with funding from
UCL School of Slavonic and East European Studies (SSEES)

<https://archive.org/details/SSEES0024>

Economic Policy and Growth of Central and East European Countries

Economic Policy and Growth of Central and East European Countries

Edited by
Krzysztof Piech

London 2003

Publication financed by the International Visegrad Fund
in Bratislava (www.visegradfund.org).

EDITED BY KRZYSZTOF PIECH



Scientific reviewers:

Ingeborg Nemcova, PhD (Economic University in Prague)
Prof Jan Kaja (Warsaw School of Economics)

Computer and language editing:

Christine Fernandes, Dan Št'astný, Łukasz Wódkowski

© Copyright of School of Slavonic and East European Studies 2003

SSEES Occasional Papers No. 59

ISBN: 0-903425-70-X

All rights reserved. No part of this publication may be stored in a retrieval system or transmitted in any other form or by any other means, electronic, mechanical, recording or otherwise, without the prior permission of the copyright owner.

Copies of this publication and others in the referred series of Occasional Papers can be obtained from the Publications Offices, School of Slavonic and East European Studies – University College London, Senate House, Malet Street, London WC1E 7HU.
www.ssees.ac.uk

Printed in Poland by The Knowledge Institute.

Warsaw School of Economics, Al. Niepodleglosci 162, 02-554 Warsaw, Poland
www.instytut.info; info@instytut.info

Contents

Introduction	vii
Authors	ix
 Part 1. External and Theoretical Conditions of Economic Policy and Growth of Central and East European Countries	
The Institutional Approach to Economic Policy <i>Anna Horodecka</i>	3
Imperfect Capital Allocation in a Transition Economy <i>Jan Kubiček</i>	13
The Evolution of World Economic Recessions – Their Regularities and Consequences for Central and East European Countries' Development <i>Krzysztof Piech</i>	25
Economic Interrelations between Central and East European Countries <i>Dariusz Jagiełło</i>	47
Convergence in Employment Structures: Transition Countries versus the EU: Reforms, Income Levels or Specialisation Patterns? <i>Tomasz Mickiewicz</i>	59
The Viability of the Baltic Way towards Convergence and the European Union <i>Gábor Orbán</i>	83
The Appropriate Exchange Rate System for Integration of the Baltic Countries into the European Monetary Union: The Case of Lithuania, Latvia and Estonia <i>Katarzyna Wiśniewska</i>	93
 Part 2. The European Union Integration Process and CEE Countries	
The Reform of European Union Institutions in the context of Enlargement <i>Dana Viktorová</i>	103
The Evolution of the European Social Fund as an Instrument supporting the Fight against Unemployment in the European Union <i>Dominik Sobczak</i>	113
Convergence across European Union Members and Consequences for the Czech Republic <i>Patrik Bauer</i>	125

The Stability and Sustainability of the Polish Economy to integrate into the European Union <i>Abey Hailu Senbeta</i>	135
Main Issues and Benefits of European Union Enlargement concerning Poland <i>Marcin Kulikowski</i>	157
Part 3. Economic Policy and Growth within Visegrad Countries	
The Synchronisation of the Polish Business Cycle <i>Krzysztof Piech</i>	167
Macroeconomic Development of Slovakia during the Transition Process <i>Gabriela Revilakova</i>	177
The International Debt of Poland <i>Monika Bodo</i>	183
Consumption Patterns in Poland during Transition – Microeconomic Analysis with Regional Aspects <i>Krzysztof Piech</i>	195
Poland as the Insurance Market Leader among Countries of the Visegrad Group <i>Tomasz Bernat</i>	213
The Regional Policy and SMEs in the Zlin Region <i>Marek Beran and Kamil Dobeš</i>	219
Part 4. Technological Changes and Transition Countries' Prospects for Growth	
The Institutional Infrastructure of the 'New Economy' and Catching-up Potential of Post-Socialist Countries <i>Marcin Piątkowski</i>	229
The Technology Gap and Catching-up Process in Visegrad Countries <i>Martin Srholec</i>	253
Competitiveness of Central and East European Countries and Economic Policy towards Transition to Digitalism <i>Krzysztof Piech</i>	261
The Visegrad Group and International Visegrad Fund – basic issues	285
Index	287

Introduction

This book is aimed at presenting some aspects of the Central and East European countries' development during the transition period, as well as their prospects for growth. Special attention is paid to the Visegrad countries. The book collects the achievements of economists, who specialise in Central and East European related research fields, mostly connected with economic policy.

It is a result of a project "Visegrad Seminars of Economic Policy" co-financed by the International Visegrad Fund, and co-organised by economic policy departments of the Warsaw School of Economics, Budapest University of Economic Sciences, the University of Economics in Prague and the University of Economics in Bratislava. The cooperation between them started as early as 1996 and deepened thereafter. The project began in 2001 and ended in 2002. The book also includes some papers from Luxembourg, London and different academic centres in Poland, collected with the help of the coordinator of the project. It should be emphasised that the articles in this book were collected in 2002 (some at the end of 2001), thus some of the data do not necessarily correspond with the actual data as the date of publishing (2003).

The book begins by outlining external conditions of economic policy and growth as a whole, leading in the direction of the EU and the Baltics. The first paper in this part reviews some theoretical concepts of economic policy making from the institutional point of view. The next analyses the world economic recessions' phenomena from the historical point of view and draws conclusions regarding the Central and East European countries' development. The next paper concerns various aspects of employment convergence of transition countries to EU countries. The next two papers are aimed at presenting the Baltic countries financial and real convergence with European Union. The last in this part analyses theoretical matters connected with capital allocation in transition economies.

The second part of the book entitled "European Union Integration Process and CEE Countries" is formed of five papers. It looks at the challenges for Central and East European countries of facing European Union integration, which are very up-to-date problems. It begins with EU enlargement topics and its institutional reforms, and then goes to the evolution of EU social security matters. The third paper analyses the convergence process of EU member-states and draws conclusions for the Czech Republic. The next papers concern EU-Polish related interests: the stability and sustainability of the Polish economy as well as future benefits of EU enlargement.

Part three is devoted to the problems of "Economic Policy and Growth within CEE Countries". The first paper relates to economic linkages between CEE countries, based on correlation analysis. The following paper also uses this technique, to identify international synchronisation of the Polish business cycle. The next papers are concerned with the macroeconomic analysis of certain countries: Slovak Republic development and Polish international debt, and the next – with changes in consumption behaviour in Poland, from the regional point of view. The next paper concerns the microeconomic comparison of Visegrad countries' insurance markets, and the last one analyses the case of regional policy and SMEs in the Czech Republic.

The last part of the book: “Technological Changes and Visegrad Countries’ Prospects for Growth” consists of three papers. All of them relate to the catching-up process and outline the future possible economic development of the Central and East European countries, which could be achieved thanks to technological progress. The first paper analyses institutional aspects, the next measures the technology gap, and the last concerns competitiveness performance. They emphasise the need for changes in economic policy towards knowledge-based economy.

I would like to express my gratitude to the people who contributed to the creation of this book. I would like to thank the heads of economic policy departments: Prof Jan Kaja from Warsaw School of Economics, Prof Pavol Vincúr from University of Economics in Bratislava, Prof Péter Ákos Bod from Budapest University of Economic Sciences, Prof Milan Žák from University of Economics in Prague. I would like to acknowledge the organisational contribution to the “Visegrad Seminars on Economic Policy” project of Dr Ingeborg Němcová and Dr Anna Kadeřábková, Dr László Andor and Tamas Nagy, as well as the authorities of the Warsaw School of Economics, who supported the project, especially its rector Prof Marek Rocki, and the publisher: School of Slavonic and East European Studies, University College London and its director Prof George Kolankiewicz. My special gratitude should be expressed to Dariusz Jagiełło, who animated the whole project. Without his contribution, the project would not have succeeded. I am also grateful to those who helped with the editorial work on this book: Dan Šťastný and Łukasz Wódkowski, as well as Christine Fernandes, who patiently read and amended the texts.

I would like to thank many other people not mentioned above, for their contribution to the project, as well as the institutions: International Visegrad Fund, Warsaw School of Economics, Budapest University of Social Sciences, University of Economics in Prague, School of Slavonic and East European Studies, University College London, MB Grabowski Fund (London), Foundation for Polish Science (Warsaw), the Foreign and Commonwealth Office (London), and The Knowledge Institute (Warsaw).

Krzysztof Piech
February 2003, London

Authors

1. Patrik Bauer – PhD student at the Institute of Economic Studies, Charles University in Prague (the Czech Republic). E-mail: Patrik.Bauer@seznam.cz.
2. Marek Beran – PhD student in Corporate Management at the Faculty of Management and Economy, Tomas Bata University in Zlín (the Czech Republic). E-mail: beran@fame.utb.cz.
3. Tomasz Bernat, PhD – lecturer at the Microeconomics Department, University of Szczecin (Poland); specialises in risk management and economic insurance. E-mail: bernat@uoo.univ.szczecin.pl.
4. Monika Bodo – assistant at the Microeconomics and Applied Economics Department, Technical University of Koszalin (Poland); specialises in international debt. E-mail: m_bodo@excite.com.
5. Kamil Dobeš – PhD student in Corporate Management at the Faculty of Management and Economy, Tomas Bata University in Zlín (the Czech Republic). E-mail: dobesh@fame.utb.cz.
6. Anna Horodecka – PhD student at the Economic Policy Department, Warsaw School of Economics (Poland). E-mail: ahorod@sgh.waw.pl.
7. Dariusz Jagiełło – former head of the Student Scientific Society of Economic Policy at the Warsaw School of Economics (Poland); the paper presented in this book was awarded in 2001 by the Governor of the National Bank of Poland, Prof Leszek Balcerowicz and the Rector of the Warsaw School of Economics, Prof Marek Rocki for the best scientific paper of student scientific societies. E-mail: djagie@sgh.waw.pl.
8. Jan Kubíček – lecturer and PhD student at the Department of Economic Policy, University of Economics in Prague (the Czech Republic). E-mail: kubicek@vse.cz.
9. Marcin Kulikowski – PhD student at the Management and Finance Faculty, Warsaw School of Economics; head of Polish Student Scientific Association; former vice-president of Student Scientific Society of Economic Policy at the Warsaw School of Economics (Poland). E-mail: mkulik@sgh.waw.pl.
10. Tomasz Mickiewicz, PhD – Senior Lecturer in Economic Restructuring in Central & Eastern Europe at the Social Sciences Department, School of Slavonic and East European Studies, University College London; head of the Centre for the Study of Economic and Social Change in Europe at SSEES-UCL. E-mail: t.mickiewicz@ssees.ac.uk.
11. Gábor Orbán – 5th year student at the Economic Policy Department, Budapest University of Economic Sciences (Hungary). Email: gorban@axelero.hu.
12. Marcin Piątkowski – Research Director of the Transformation, Integration and Globalization Economic Research (TIGER) in Warsaw (Poland); advisor to Poland's Deputy Premier and Minister of Finance Grzegorz W. Kołodko, a member of his Political Cabinet (since September 2002); PhD candidate and lecturer in banking at Leon Kozminski Academy of Entrepreneurship and Management in Warsaw; editor of the "TIGER Working Paper Series". E-mail: mpiatek@tiger.edu.pl.

13. Krzysztof Piech, PhD – assistant at the Economic Policy Department, Warsaw School of Economics (Poland); secretary and member of editorial board of scientific magazine “Polityka Gospodarcza”; Head of Economic Policy Section in Warsaw Branch of Polish Economic Association (and a member of the Scientific Board); member of European Economic Association; President of The Knowledge Institute (Warsaw); editor or co-editor of eight books published in Poland (in Polish and in English); currently Honorary Post-Doctoral Research Fellow in the Social Sciences Department, School of Slavonic and East European Studies – University College London, Chevening-FNP (Foundation for Polish Science, Warsaw) Post-Doctoral Fellow. E-mail: kpiech@sgh.waw.pl.
14. Gabriela Revilakova – PhD student at the Economic Policy Department, University of Economics in Bratislava (Slovakia). E-mail: g.revilakova@orangemail.sk.
15. Abey Hailu Senbeta, PhD – research assistant at the Luxembourg Institute for European and International Studies (Luxembourg); specialises in Polish-EU economic relations. E-mail: abey.hailu@ieis.lu.
16. Dominik Sobczak – assistant at the Department of International Security, Warsaw School of Economics (Poland). E-mail: dsobcz@sgh.waw.pl.
17. Martin Srholec – assistant at the Economic Policy Department, University of Economics in Prague (the Czech Republic); researcher at the Centre for Technology, Innovation and Culture, University of Oslo (Norway). E-mail: martin.srholec@tik.uio.no.
18. Dana Viktorová – assistant at the Department of Economic Policy, University of Economics in Prague (the Czech Republic). E-mail: viktor@nb.vse.cz.
19. Katarzyna Wiśniewska – 4th year student of the Warsaw School of Economics (Poland); member of the Student Scientific Society of Economic Policy at the Warsaw School of Economics. E-mail: kw20912@sgh.waw.pl.

Part 1

External and Theoretical Conditions of Economic Policy and Growth of Central and East European Countries

The Institutional Approach to Economic Policy

Anna Horodecka

This article's topic is the institutional approach to economic policy based on economics schools, but not in all cases. The lack of one consistent theory that will help the policy makers is the main challenge that we meet in the theory of economic policy: scientific discipline, which aims at giving explanations and describing the concept of practical economic policy, using available methods and information (see: Piech, 2002).¹ The method used in economic policy is either a deductive one or an empiric one. We can use here an experiment or a quasi-experiment (Gajek and Kałuska, 2000, p. 13). Many problems that are met when using the neoclassical approach cause increasing interest in the heterodox schools of economics.

Economic policy is a part of economic sciences (more precise classifications can be found in Gide, 1922, p. 4²; Krajewski, 1998, p. 230; Bartling, 1993, p. 9) so it should take its assumptions from economy. As the neo-classical thought is an orthodox trend in economics, the rules that are in neo-classical thought should be (a positive approach) proper for economic policy. This is the predominant opinion in many books. Economists describe such an approach as positive³. Economists in favour of this approach focus on universalistic solutions and try to build a coherent model (Tomidajewicz, 1999, p. 165).

Many policy makers expect accurate statements from economy, i.e. how they should create policy to achieve the desired goals. This approach is defined as normative. Such an approach presents no coherent theory. Very often many doctrines and beliefs can be found here.⁴

The last approach, the descriptive one, is new. It can be found in the publications of Kaja (1999) but its background can be traced to American and Japanese literature. There it is called the contingency or situational approach. The theory of economic policy should examine economic policy in one country very precisely. Economists should describe all facts, providing information on reasons for such a policy in any given country, on the time and on the facts influencing it. They make no assumptions nor do they say that their conclusions should be of any importance for another country or for another time. Their theory is valid only for a specific time and place.

The approach I will describe in this article is new one. It is based on the three above-mentioned approaches. It uses the theory of economics but not the neo-classical school, so it has the characteristics of the positive approach. However, they do not say

¹ They present their definitions on the basis of a normative or positive approach. The normative approach according to these definitions means that the theory of economic policy gives answers about methods we can use to achieve a desired goal. See other definitions such as Piech, 2000; Winiarski, 2000, p. 22; Lange, 1959, p. 85; Taylor, 1947, p. 39; Tinbergen, 1978, p. 6.

² He saw economic policy as a part of social economic sciences.

³ The beginning of this theory is associated with the name of Weber.

⁴ More about this approach and its origin can be found in Smith (1954) and his followers in contemporary studies like Pies (1993, p. 311), especially interesting are his thoughts on normative institutional economics.

that in all countries there are the same rules on the basis of which policy makers should make their decisions. The institutional approach has much to say to policy makers about how they should create their policy and about the priorities, so they are, in this point similar to the normative approach. On the other hand, they do not base their theory on the doctrine but on the coherent theories that are developed regularly by new institutionalists. Finally, we see similarities to the descriptive approach. The institutional approach is not a neo-classical one, where only the economical factors are of importance. The representatives of institutionalism claim that all factors, especially social and historical, can create an institution and so they are of importance and the economist should be interested in them. We do not say that we absolutely cannot discover anything about a non-examined country because in all countries there are institutions. The evolution of the institution can decrease or increase the transactional costs. We need only examine the institutions in this country in more detail.

Economic policy should be based on the institutional economy. But what does institutional economy mean? At this point I am going to describe the evolution of this heterodox stream of economy.

Institutionalism has its background in a broader stream (Stankiewicz, 1998). Firstly, it is based on the German Historical School, which is one school of the heterodox stream. These heterodox approaches have the same critical relation to the classical / neo-classical school. They have emphasised the role of historical and social factors that influence the economy. They also say that each country has its individual history and culture so we cannot say that the same rule for e.g. liberalism, can have the same results in all countries. And liberalism is one of the postulates of neo-classical economists. Heterodox economists do not attempt to create a theory that will be valid for all times and places. The next common characteristic of these schools is evolutionary thinking. Economy is an evolutionary process not a static phenomenon (see Landreth and Colander, 1998, p. 471-476). They have opposed the strict formalism of the classical (later neo-classical) school (see Reuter, 1996, p. 62). The second school that had a significant impact on institutionalism was Pragmatism, and the third – Darwinism and evolutionism (see Reuter, 1996, p. 61).

This stream was the base for another heterodox thinker, Thorsten Veblen (1857-1929; 1919), “the father” of the institutional school. His innovation was the institutional approach to economy. He was the economist who was the first to say that institutions should be the primary category of economic thought. That means that institutions evolve from a set of traditions that are of importance in one country.

His followers, John R. Commons (1862-1945) and Wesley C. Mitchell (1874-1948), have tried to operationalise the social category of institutions. The latter is especially known because of his statistical tables. He concentrated in his works on country-specific aspects, and on empirical research. Thus, his work was characterised as the “measuring without theory”, but he is also the specialist in the field of business cycles (Mitchell, 1913).

Because of the difficulties in operationalising the category of institution and the lack of the consistent theory, the above-mentioned heterodox theory was almost forgotten and did not come into mainstream thought. They perceive the institution as a stable and dominant way of thinking or acting, that is embodied in traditions of the

people and their customs (Hamilton, 1932, p. 84-89).⁵ Its critique of the neo-classical approach was principally well structured, so the neo-classical thinkers have been more and more interested in this approach. They tried not to lose their own identity. They did not want to resign from the main assumptions of neo-classical thought. The central concept of which is that the individual's needs are assumed as given. In this way, a new school in economics was created – the New Institutionalism (see more by: Langlois, 1989; Erlei, 1999). The differences between old and new institutionalism were presented by Rutherford, 1996⁶. The main task for the New Institutionalists was the construction of a theory. They asked themselves how to measure the influence on the economy and in which categories. Their idea was then to ask the question of why institutions exist. The answer required the setting up of the category, transaction costs. These costs are incurred when entering into contracts, due to the lack of security. The lack of well described and fully-enforced property rights is a good example of such costs. People can operate only when they think that the execution of the transaction will be secure. Property rights are not the only factor contributing to transactions cost. When a product is sold, the producer uses advertising. The potential buyer has to take time and money to obtain information about the product. All this contributes to the costs that were not mentioned in the neo-classical theory. The costs would not arise if people were honest, and all the potential buyers and sellers and quality of products, were known. As such a situation is an ideal one, there is an effort by people to protect themselves by creating an institution or organisation. In conclusion, we can say that not only institutions influence the behaviour of men, but the individual influences the institution as well (Held and Nutzinger, 1999, p. 7).

The government is a special case. The cost of governing and execution of the law is so high that even a non-majoritarian institution has power, and such situations occur, even in the democratic system (Majone, 2001, p. 59). An example of such an institution is a central bank. That is why the main function of the state is to lower the transaction costs.

We have already discussed transaction costs and their elements. We have said that there are many rules that can simplify transactions and that can distort the contacts (for example dishonesty, egoism and so on). All the rules (elements of an institution) can affect the contract positively or negatively. We see that the rules can have a second classification: they can be formal and informal. Formal rules using the definition of Douglass C. North are divided into political, economic and contracts (North, 1997, p. 7). Informal rules evolve because of the lack of precision of the formal ones. They are useful because sometimes it is very difficult to cope with the amount of information we have. So we simplify it using informal rules such as conventions, behaviour norms and codes of behaviour. We can say that these are the most important assumptions of this theory. As to the most important characteristic features of institutionalism, I shall present these according to Mark Blaug (1994, p. 744-746):

⁵ Institution is also defined as the system of social roles and norms which regulate the way of behaving; see: Kopaliński, 1968, p. 337.

⁶ The main difference at the conception of the institution. The new institutionalists apply the term “institution” only to precisely described organisations.

1. critical attitude towards the high abstraction level and static character of neo-classical theory,
2. the desire of integration between social and economic sciences,
3. critical standing to empiricism of the neo-classical thought.

The economists who have publicised within this stream are Williamson (1998), North (1981; 1997)⁷, Tool (1993), Pejović (1995), Olson, Hayek, Sugden, Mirowski, Demsetz, Palsner, Schotter.

At the same time not only economists were interested in institutions, economic sociology also started exploring the domain. The very important publication of Smelser and Swedberg (1994) is an example for the activity of scientists who are engaged in this field. As far as Polish publications are concerned, we can mention Morawski (2001, 1998); Gilejko (1994). Economic sociology is based on three assumptions:

- Economic action is embedded in networks of social relationships,
- Economic action is described as the social process,
- Economic institutions are socially constructed (see Schotter, 1981, p. 18).

Its discipline is focused mainly on such themes:

- macro relations between society and economy,
- industrial relations,
- social setting of individuals in the terms of social change,
- sociology of the market (see Morawski, 2001, p. 31).

The long lack of cooperation between these approaches resulted from the neo-classical core of the New Institutionalism. That is why sociology could not take such a school into account. New Economic Sociology (NES) is less differential to New Institutionalism but it still has no interest in the evolutionary approach to institutional economics and it is not preoccupied with technology. NES have three most important traditions: American (Parson), French (Durkheim) and German (Weber) (see Velthuis, 1999, p. 630).

Now, when we are accustomed to the terminology of institutionalism, we can say something about the institutional approach to economic policy: what the policy makers should do and how institutions can affect an economic policy.

Institutions as part of the social-economic system in the state, have an influence on economic performance. According to E. Okoń-Horodyńska, the economic system should be subject to interdisciplinary studies (empirical, sociological, psychological and economical) because of its complexity (Okoń-Horodyńska, 1996, p. 20). It does not imply that neo-classical thinkers do not appreciate the importance of these conditions, but they have taken them as given. And when we apply the institutional approach we know how it functions and we know that the role of government will probably be to introduce appropriate changes to the institutional setting disturbing the economy. We do not change the system (system goals of economic policy), but its effectiveness.

⁷ He focuses mainly on the so-called institutional change, which influenced the shaping of economic history.

The second element of economic policy is its goals. There are many classifications and definitions that are constructed on the basis of the neo-classical or Keynesian theory. But we also have to look at the current experiences of our own or other countries. In Germany, we have a set of goals, the so-called stabilisation's goals in the law (so-called "Stabilitätsgesetz"⁸, StabG, 1967). One of the most important, or at least most cited goals, is economic growth. We use GDP in all contemporary studies. The level of economic growth in the situation of a world recession is very important for many countries. That is why there is so much interest in the theories of economic growth. We are acquainted with two: the classical and Keynesian theory. Both of them have their good and poor points. The critique of the classical factorial theory (Altmann, 1995, p. 74) was that technical progress was taken as exogen, there was no place for the state. The Keynesian one saw the role of the state as increasing expenditures. It affected output. But it is short-term growth ("bubbled growth"), the period after such an intrusion in the market was a return to the previous level of growth. On the basis of these two there evolved a new one: new neo-classical theory of economic growth, which also accepts the neo-classical assumptions and the factorial approach but at the same time says something new: the technical progress is an endogen factor and its source lies in R&D expenditures, education, human capital and so on.

The institutional approach is very similar. The factor of technical progress is the innovation which results from institutional change. The technical, organisational and institutional innovations are the basis of long-term economic growth (Galbraith, 1991, pp. 296-313). Ideological and cultural factors play a very important role (Okoń-Horodyńska, 1996, p. 85). The crucial role of the historical factor is the innovation of institutionalists. D. C. North says that it was the dominant factor that influenced economic growth in the eighteenth century (North, 1997). That is why the classical approach of contemporary economists like Adam Smith does not mention factors like changes in organisation and technology. The same can affect our way of thinking about current changes in organisation and technology. We mention (see: Drucker, 1999) the information revolution and post-industrial society. The new institutionalists stressed the role of transactional cost. They see economic growth as the process of accumulated changes either in quality or in quantity that are gathered and embodied in the system. (Rosenberg and Birdzel, 1994, pp. 5-12). We shall also take into account the evolutionary character of the economic system (Kowalik, 2000), because evolutionary change is the source of economic growth, as it was presented by Mazur (1991, p. 329). Effectiveness of institutions helps to lower these costs and so the economic performance can be higher. E. Okoń-Horodyńska listed the role of institutions in economic development in such a way:

- organisation and coordination of economic activity,
- motivation for achieving high effectiveness (it is very important to motivate people and their moral behaviour, see: Held, Nutzinger, 1999, p. 7),
- control of the performance and appropriate revenues,
- efficient operation and better distribution in the whole system.

⁸ Gesetz zur Förderung der Stabilität und des Wachstums der Wirtschaft.

We can present all the factors influencing economic growth in the form of a table. We do stress that all the factors should be taken into account by the policy maker. They can be divided into general, social, political and economic. For a more detailed classification see Israel (1989).

Table 1. Institutional factors that influence economic growth

Conditions	Factors
General	<ul style="list-style-type: none"> • Ideas and opinions that are dominant in society. • The history of society.
Social	<ul style="list-style-type: none"> • Comparatively stable characteristics of the social system that has changed the evolution of society. • Psychological features of the people who live in this society. • The special role played by national culture, mentality, ethical patterns of behaviour.
Political	The quality of the constitution, methods of the cooperation between state and business, political culture, informal rules and traditions.
Economical	<ul style="list-style-type: none"> • Strict “rules of the game”, selection of the activity that can be effective or not effective. • Precisely defined propriety rights. • Functions and social rules of the trade. • Effective working financial and banking system. • Appropriate methods of management of risk and insurance system • Accepted and not disturbing tax system. • Multi-centre structure of economy. • Basic assumptions of the economical institutions that influence positively long-term growth.

We can say that the main challenge for the practical economic policy is the contemporary activity on the political, social, economical level. All this should be done in order to obtain better performance, in terms of economic growth. The main power that has an impact on economic growth is innovation, so there should be not only bigger expenditures on R&D, but also better organisation of the educational system. According to this, the role of the state can consist in paying more attention to education (Held and Nutzinger, 1999, p. 7; Jickeli, 1999, p. 87⁹). The state should also set more effective rules (formal) and influence in the long term, the informal ones. The most important rules are proprietary and liberty rights. They should be well defined and effective. To enlarge the motivation and moral capacity of the country, the state should help organisations which promote well motivated behaviour and moral values (for example church organisations, voluntary organisations). A very important factor is harmony between competitiveness and cooperation. Systems not characterised by these features do not reach economic growth (McRae, 1996, p. 15-42). So we can say that

⁹ According to Jickeli (2001) the pure market solution concerning education will fail because the problem of education is too important to be the parents' responsibility. They are sometimes tempted to keep children at home so that they can work.

institutionalism as an approach to economic policy is closely connected to heterodox thinking as far as the role of interventionism¹⁰ is concerned, but, on the other hand, it has an impact mainly on organisational aspects of life and no direct influence on production (see the opinion of Kaja and Xinli, 2000).

So there is a big challenge for the theory of economic policy, which should be interested in the institution present in the country being examined and the relations between them. They should be well described because many of them cannot be changed (Le Bone, 1999, p. 74). They should also prove the formal and informal rules and their impact on the transaction costs. They should show an interest in cultural factors and the historical setting of the country. They should remember that researching of an institution is necessary to understand social life and human behaviour (Baldassari, 1998, p. 4).

In conclusion, I want to say that there are many new fields in heterodox economy, which could be applied to economic policy. In my opinion, economists should take incentives from heterodox theories and experiences, especially when orthodox theories have so many unrealistic assumptions.

¹⁰ The term “state intervention” (French: “*l’interventionnisme*” or “*l’intervention de l’Etat*”), was introduced to the social sciences by French economists, see: Szostak (1999, p. 18).

References:

- Altmann, J. (1995), *Wirtschaftspolitik*, Gustav-Fischer Verlag, Stuttgart-Jena.
- Baldassari, M., Paganetto, L., Phelps, E. S. (1998), *Institutions and Economic Organizations in Advanced Economies. The Governance Perspective*, Servisio.
- Bartling, H., Luzius, F. (1993), *Grundzüge der Volkswirtschaftslehre*, Verlag Vahlen, München.
- Blaug, M. (1994), *Teoria ekonomii. Ujęcie retrospektywne*, PWN, Warsaw.
- Drucker, P. F. (1999), *Spółeczeństwo pokapitalistyczne*, PWN, Warsaw.
- Erlei, M., Leschke, M., Sauerband, D. (1999), *Neue Institutionensökonomik*, Schäfer-Poeschel Verlag, Stuttgart.
- Gajek, L., Kałużka, M. (2000), *Wnioskowanie statystyczne: modele i metody*, Wydawnictwo Naukowo-Techniczne, Warsaw.
- Galbraith, J. K. (1991), *Ekonomia w perspektywie. Krytyka historyczna*, PWE, Warsaw.
- Gide, K. (1922), *Zasady ekonomii politycznej*, Fischer i Majewski, Poznań.
- Gileyko, L. (1994), *Spółeczeństwo a gospodarka. Socjologia ekonomiczna*, SGH, Warsaw.
- Hamilton, W. H. (1932), 'Institution', in: Edwin, R.A. (ed.), *Encyclopedia of the Social Sciences*, Seligman & A. Johnson, Chicago.
- Held, M., Nutzinger, H. G. (1999), *Institutionen prägen Menschen: Bausteine zu einer allgemeinen Institutionenökonomik*, Campus Verlag, Frankfurt/Main; New York.
- Israel, A. (1989), *Institutional Development. Incentives to Performance*, The John Hopkins University Press, Baltimore and London.
- Jickeli, J. (2001), 'The Role of Markets and Government in Human Capital Building and Education. A Research Program in Institutional Economics', *JITE Journal of Institutional and Theoretical Economics*, 157/1, pp. 87-107.
- Kaja, J. (1999), *Polityka gospodarcza. Wstęp do teorii*, SGH, Warsaw.
- Kaja, J., Xinli, Y. (2000), 'Two Roads, One Goal – the Comparison of Polish and Chinese Administrative Reform', *Polityka Gospodarcza*, 3, pp. 17-23.
- Kopaliński, W. (1968), *Słownik wyrazów obcych i zwrotów obcojęzycznych* Wiedza Powszechna, Warsaw.
- Kowalik, T. (2000), *Współczesne systemy ekonomiczne. Powstawanie, rewolucja, kryzys*, Wydawnictwo Wyższej Szkoły Przedsiębiorczości i Zarządzania im. Leona Koźmińskiego, Warsaw.
- Krajewski, W. (1998), *Prawa nauki, Przegląd zagadnień metodologicznych i filozoficznych*, KIW, Warsaw.
- Landreth, H., Colander, D. C. (1998), *Historia myśli ekonomicznej*, PWN, Warsaw.
- Lange, O. (1959), *Ekonomia polityczna, T. 1: zagadnienia ogólne*, PWN, Warsaw.

- Langlois, R. N. (ed.) (1989), *Economics as a process. Essays in the new Institutional Economics*, Cambridge University Press, New York.
- Le Bon, G. (1999), *Psychologia rozwoju narodów*, Wyd. V.I.D.I., Nowy Sącz.
- Majone, G. (2001), 'Nonmajoritan Institutions and the Limits of Democratic Governance. A Political Transaction Cost Approach', *Journal of Institutional and Theoretical Economics* 157/1, pp. 57-78.
- Mazur, M. (1991), 'Metoda badawcza instytucjonalizmu', *Ekonomista*, no. 2-3.
- McRae, H. (1996), *Świat w roku 2020 Potęga, kult, dobrobyt – wizja przyszłości*, Dom Wyd. ABC, Warsaw.
- Mitchell, W. C. (1913), *Business Cycles*, B. Franklin, New York.
- Morawski, W. (1998), *Zmiana instytucjonalna. Społeczeństwo. Gospodarka. Polityka*, PWN, Warsaw.
- (2001), *Socjologia ekonomiczna*, PWN, Warsaw.
- North, D.C. (1981), *Structure and Change in Economic History*, W. W. Norton & Company, New York-London.
- (1997), *The Process of Economic Change*, United Nations University / World Institute for Development Economics Research, Helsinki.
- Okoń-Horodyńska, E. (ed.) (1996), *Instytucjonalne podejście w analizie procesów społeczno gospodarczych i politycznych w Polsce*, Akademia Ekonomiczna im. Karola Akademickiego, Katowice.
- Pejović, S. (1995), *Economic analysis of institutions and systems*, Kluwer Academic Publishers, Dordrecht.
- Piech, K. (2000), 'Metodologiczne aspekty polityki gospodarczej', *Polityka Gospodarcza*, 3, pp. 73-92.
- (2002), 'Etymologiczna i sokratyczna definicja polityki gospodarczej', *Polityka Gospodarcza*, 5-6, pp. 235-259.
- Pies, I. (1993), *Normative Institutionsökonomik. Zur Rationalisierung des politischen Liberalismus*, J.C.B. Mohr (Paul Siebeck), Tübingen.
- Reuter, N. (1996), *Der Institutionalismus. Geschichte und Theorie der evolutionären Ökonomie*, Metropolis Verlag, Marburg.
- Rosenberg, N., Birdzel, L. E. Jr (1994), *Historia kapitalizmu*, Znak, Kraków.
- Rutherford, M. (1996), *Institutions in economics. The old and the new in structuralism*, University Press, Cambridge.
- Schotter, A. (1981), *The Economic Theory of Social Institutions*, Cambridge University Press, New York.
- Smelser, N. J., Swedberg, R. (1994), *The Handbook of Economic Sociology*, Princeton University Press & Russel Sage Foundation, Princeton - New York.
- Smith, A. (1954), *Badania nad naturą i przyczynami bogactwa narodów*. T.1, 2, PWN, Warsaw.
- Stankiewicz, W. (1998), *Historia myśli ekonomicznej*, PWE, Warsaw.

- Szostak, A. (1999), 'Odwrót od nadmiernego interwencjonizmu państwa jako zjawisko globalne', in: *Tendencje rozwoju społeczno-gospodarczego krajów rozwijających się i ich znaczenie dla Polski*, Instytut Gospodarki Krajów Rozwijających Się SGPiS, SGH, Warsaw 1999, pp. 17-51.
- Taylor, E. (1947), *Wstęp do ekonomiki*, Wyd. 2, Gdynia.
- Timbergen, J. (1978), *Economic Policy. Principles and Design*, Amsterdam-New York-Oxford.
- Tomidajewicz, J. (1999), 'Czynniki zmienności modeli polityki gospodarczej', *Polityka Gospodarcza*, 2, pp. 165-173.
- Tool, M. R. (ed.) (1993), *Institutional Economics: Theory, Method, Policy*, Kluwer Academic Publishers, Boston-Dordrecht-London.
- Veblen, Th. (1919), *The Place of Science in Modern Civilisation and Other Essays*, New York.
- Velthuis, O. (1999), 'The Changing Relation Between Economics Sociology and Institutional Economics From Talcott Parsons to Mark Granovetter', *The American Journal of Economics and Sociology*, 58/4, pp. 629-649.
- Williamson, O. E. (1998), *Ekonomiczne instytucje kapitalizmu*, PWN, Warsaw.
- Winiarski, B. (ed.) (1996), *Polityka ekonomiczna*, Wrocław.

Imperfect Capital Allocation in a Transition Economy

Jan Kubiček

Inefficient allocation of resources is a frequently mentioned reason why the growth rates in transition economies are somewhat smaller than had been expected. The aim of this paper is to make a more detailed classification of capital allocation inefficiencies and to discuss whether there are any sources of particular kinds of inefficiencies, which are specific for the transition countries. The final part of the paper is devoted to the question of whether, and under what conditions, inefficient capital allocation exerts any influence on economic growth.

1. Intrafirm and interfirm capital allocation inefficiency

We can discern inefficient capital allocation within a single firm (intrafirm inefficiency) and inefficient allocation of capital among different firms (interfirm inefficiency). In the case of intrafirm inefficiency, the firm is below its production possibility curve and so it produces less than it is technologically possible given the quantities of resources. Another kind of intrafirm inefficiency arises if the product mix (i.e. the ratios of quantities of particular goods that the firm makes) does not lead to profit maximisation given the resources, even though the production of the firm is on the production possibility curve.

For further analysis a production function f is used, which connects capital stock per unit of labour k (e.g. per working hour) and production per unit of labour y . This function is increasing and it is assumed that, at least from a certain point, decreasing marginal product of capital per unit of labour starts to prevail.

2. Excessive employment

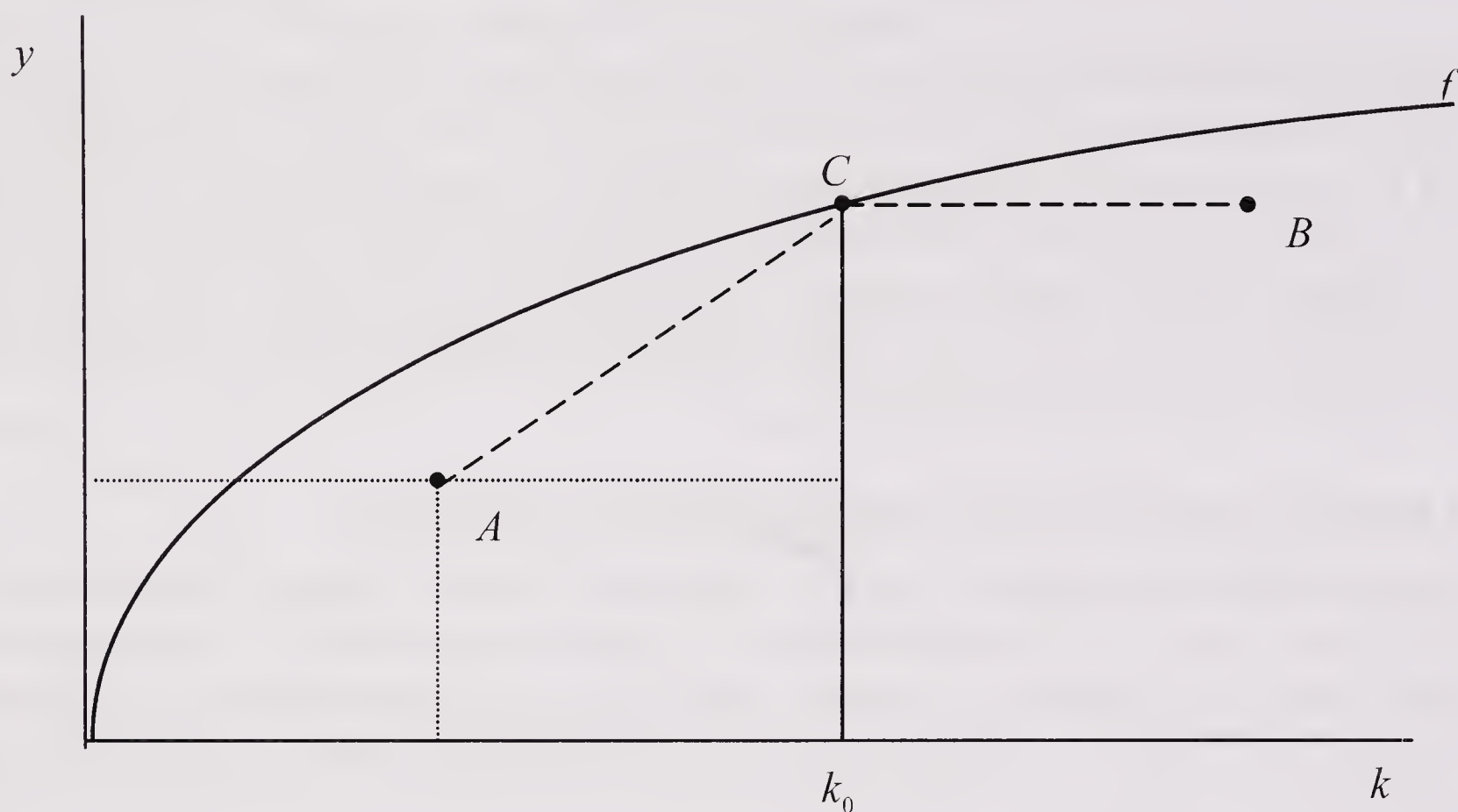
The term “excessive employment” is frequently used in connection with the formerly state-owned firms in transition economies. However, the term should not be used automatically if a firm uses more employment for producing the same quantity of goods in comparison with a comparable firm in a standard market economy. As the labour costs are substantially lower in the former centrally-planned economies, the maximisation effort of firms implies that they will use more labour than comparable firms in Western Europe.

Excessive employment must be understood in a stricter sense. By excessive employment, I mean a situation, in which, given the firm's capital stock, a given product can be produced with less units of labour than is actually used.

Using the production function, the excessive employment can be depicted as a combination of k and y , which is below the production function f and for which it holds at the same time, that volume of labour units can be decreased without k/y ratio. In figure 1 the point A corresponds to excessive employment. In the situation depicted by this point, it would be technologically possible to produce the same volume of product

keeping the firm's capital stock intact, while decreasing employment roughly down to a half.

Figure 1. Excessive employment and excessive capital goods



3. Excessive capital stock

Excessive capital stock or permanently free production capacities of a firm belong also to a situation when the firm is below its production possibilities frontier. Similarly, as in the case of excessive employment, I mean by the term “excessive capital stock” such a situation that there exist some capital goods in the firm's assets, which are not used for production. Thanks to the absence of secondary markets for capital goods, or thanks to bad management, these assets are not reallocated elsewhere. Excessive capacities therefore, mean that a given product could be produced using the same amount of labour but using a smaller quantity of capital goods than is actually used.

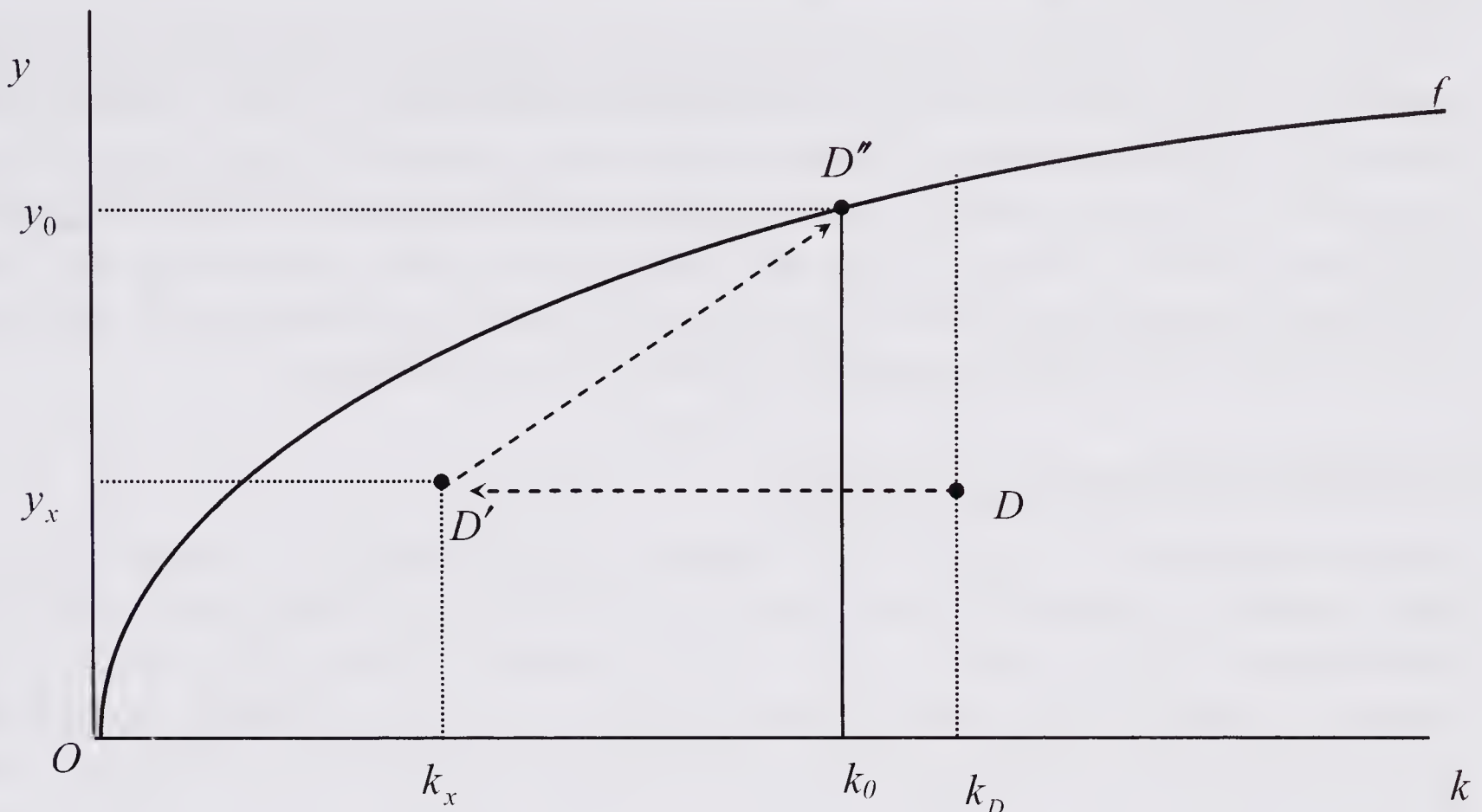
Excessive capacities are depicted in figure 2 as a combination of k and of y , which is below the production function f and for which it holds at the same time that reduction of capital stock per worker leaves the production per worker intact. The point B in figure 1 represents excessive capacities. The excessive capacities can be eliminated by selling the capital goods that are not used by the firm or by their incorporation into the production process.

Obviously, the firm may find itself in the situation of both excessive employment and excessive capital stock. To each point below f there exists just one point on the production function, for which it holds that the same quantity of product is produced without excessive labour and capital goods.

In figure 2, it is suggested how such a point can be found. Let D be a point of both excessive capacities and of excessive employment. First, let us consider elimination of excessive capital goods. If a firm manages to sell all the capital goods that were in no way used for production, capital stock per unit of labour is reduced whereas production

per unit of labour remains the same. Therefore the firm shifts from point D to D' . The point D' is consequently a point of “pure” excessive employment.

Figure 2. Elimination of excessive employment and capital goods



Reduction of the labour force given the firm's production manifests itself in figure 2 as a proportionate increase in capital per unit of labour and in production per unit of labour. The point, in which there are no more excessive employment and excessive capital stock, can be found at an intersection of the production function with a ray running from the beginning through the point D' .

4. “Inferior” combination of capital goods

A special situation, which concerns capital allocation and which should be distinguished from other kinds of allocation inefficiencies, is a situation in which all capital goods are used for production but the kind or ratios of their quantities are not “optimal”. A given combination of capital goods is not “optimal” in the sense that a firm would not choose this combination if it were to install the capital goods today, given today's relative prices and technology.

On the other hand, this situation can be optimal for the firm in a different sense. Capital goods are not homogenous, they are not malleable and they can be used only for a limited number of purposes. A changed set of relative prices and new technologies may cause reallocation of capital goods. But even if all existing capital goods were reallocated into fields of production in which they would be the most productive, it does not imply (due to their specificity) that the combination of capital goods is optimal in each firm. Despite that, the firm knows that the combination of capital goods, which it is currently using, would not be optimal if it were to start the production today, it is the best combination of already existing capital goods. Adjusting the original capital structure to a new “optimal” structure implies adjustment

costs. Therefore the firm will adjust the capital structure only if the new combination of capital goods is so much more productive than the old one that it overwhelms the adjustment costs. If this is not the case, then a change of structure of capital goods is a waste of scarce resources disregarding the fact that the new combination of capital goods is more productive.

However, this situation cannot be perceived as inefficiency in the true sense of the word, if it is not possible to increase production by reallocating existing capital goods. In this case, capital allocation is efficient given the constraints arising from the non-malleability of capital goods. The economy is, however, on a lower aggregate production function, because under the new set of relative prices and with new technologies, it would be possible to produce more with the same amount of capital per unit of labour, when using the optimal combination of capital stocks.

5. Inferior combination of outputs

Inferior combination of outputs in the case of a multi-product firm is another category within intrafirm resource allocation inefficiencies (and specially of capital allocation inefficiencies). In this case, the firm is on its production possibilities frontier. All resources are used in the production process and so it is not possible to reduce the volume of resources without reducing production, as well. The problem is that if the firm produced its goods in different ratios it would increase its profit. In other words, the firm's marginal rate of transformation (slope of a production possibility curve in a given point) is different from marginal rate of substitution in exchange. Therefore, it is possible for the firm to reduce production of one of its goods and to increase production of the other and in this way gain higher profit without changing total costs. This kind of intrafirm inefficiency is in its nature similar to interfirm inefficiency, because it deals with inefficiency due to misallocation of resources between different potential uses. However, it is connected with interfirm problems such as weak corporate governance. Moreover, capital allocation within a single firm is usually not coordinated via an impersonal mechanism and it is not complicated by activities of various independent intermediaries, as it is in case of interfirm allocation.

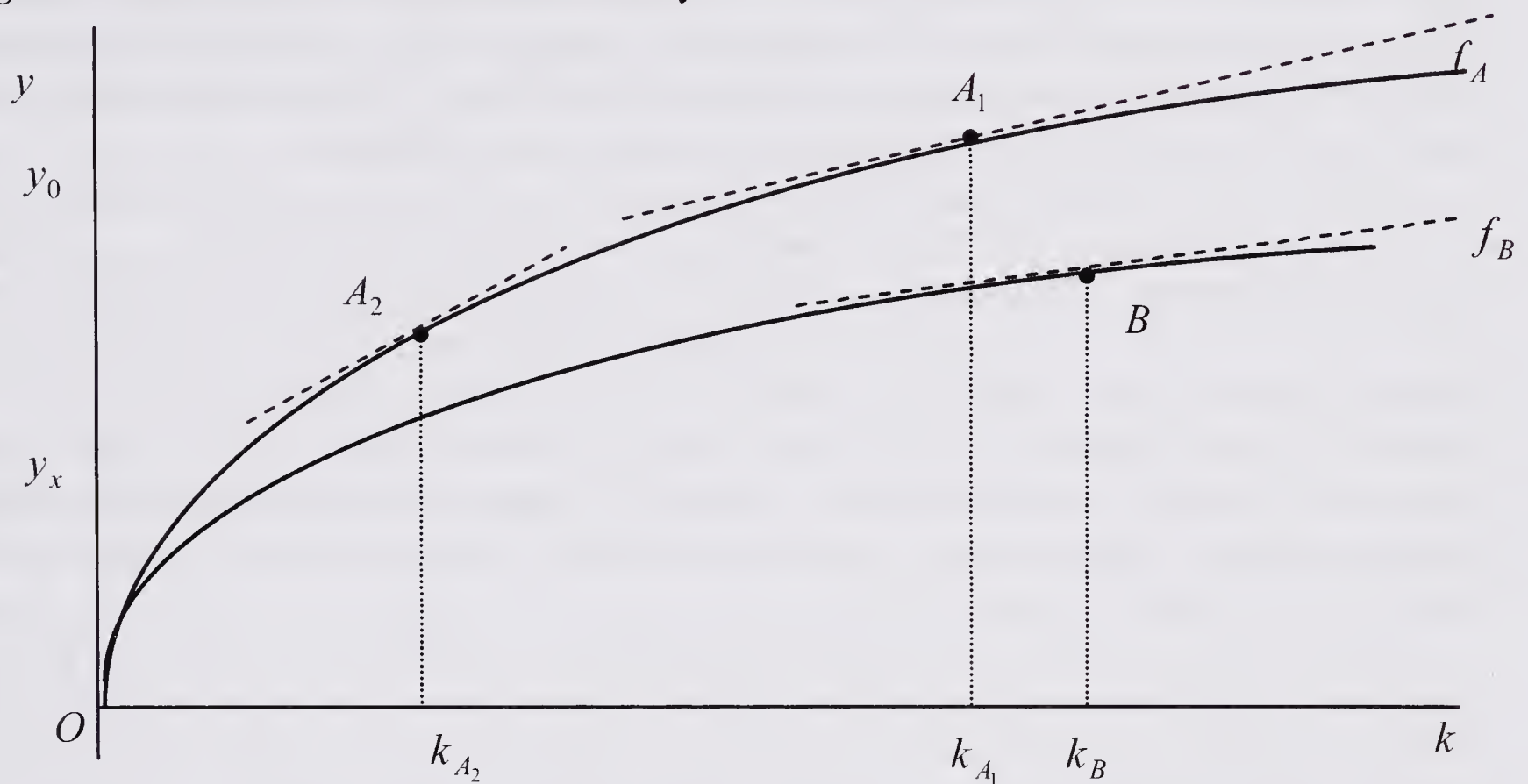
6. Interfirm capital allocation inefficiency

Interfirm inefficiency is due to misallocation of resources. If marginal products of production factors are not equalised among firms then it is possible to reallocate the resources in such a way that it would be possible to produce more with the same amount of resources.

In figure 3 the slopes of tangents touching points A_1 , A_2 and B represent marginal products of capital. A necessary condition for existence of capital allocation inefficiency is that there exists at least one pair of firms such that $f'_A(k_i) \neq f'_A(k_j)$ or $f'_A(k_m) \neq f'_B(k_n)$. We can further discern between, on the one hand, inefficiency within a

single “industry”¹, i.e. inefficiency due to the fact that firms with the same production function have different capital stock per unit of labour, and on the other hand, inefficiency due to imperfect capital allocation among firms with different production functions. It should be mentioned here that it cannot be said that allocation would be perfect if e.g. the capital stocks per unit of labour k_i, k_j, k_m, k_n in figure 3 changed into some $k_{i'}, k_{j'}, k_{m'}, k_{n'}$ such that it would hold $f'_A(k_{i'}) = f'_A(k_{j'})$ or $f'_A(k_{m'}) = f'_B(k_{n'})$.

Figure 3. Interfirm allocation inefficiency



What we call “capital” are in reality different non-malleable capital goods, the relative prices of which as against both other capital goods and consumption goods change as capital stock for production of various goods changes. In the present graphical illustration it implies that reallocation of capital would not only lead to changes in k_i, k_j, k_m, k_n , but also to shifts of the production functions f_A, f_B . If a unique production function f existed for all kinds of goods (including capital goods) and at the same time, if capital per unit of labour were the same in all firms, it would be possible to talk about perfect capital allocation because relative prices would be constant. In reality, firms differ in their production functions and these shift because of changes in relative prices of both capital and consumption goods.

7. Inefficient allocation in transition economies

Any economy can suffer from all the kinds of inefficiencies that were mentioned earlier. However, some sources of their existence are specific for transition economies.

As for excessive employment, a transition specific reason for it is that it was to a great extent inherited from the previous economic system. Elimination of excessive

¹ Industry is perceived as a group of firms with the same production function, so that no external attributes of the goods produced serve as classification criteria.

employment as a kind of intrafirm inefficiency is mainly a matter of corporate governance of individual firms. Therefore, from the point of view of economic policy, the task is not to hinder economic decisions of the firms and to enable them to follow their maximisation effort. Reduction of labour employed is not usually costly and therefore it cannot be expected that excessive employment is more frequent at private firms in the longer term in transition countries than in standard mixed economies. Substantial costs of labour reduction could be expected only in the case of very strong trade unions. Excessive employment can be intentionally maintained in state-owned firms, which quite often intentionally do not maximise profit. On a macroeconomic level, excessive employment will therefore be higher in the long term in transition economies if they have a bigger share of state-owned firms. The same thing can be said about the inferior combination of outputs in a multi-product firm.

The two other kinds of intrafirm inefficiencies are, however, more characteristic for transition economies. Excessive capital goods in transition economies are mainly due to misallocation of capital goods in the centrally-planned economies. Decisions about the structure of investment were not made on the basis of profit motive. However, even if they had been made with this motive, capital could have been allocated at best according to prices that were not market prices and thus they were giving false signals. After the dramatic changes of relative prices that took place hand in hand with price liberalisation and after liberalising the trade, lots of capital goods proved to be useless for a given firm.

In the case of excessive capital goods there is, of course, a space for their subsequent reallocation. Reallocation between firms can take place only through secondary markets of capital goods. However, capital goods are often very specific, they are not malleable and so their secondary markets (i.e. markets with partially depreciated capital goods) are frequently very shallow and furthermore there exist substantial transaction costs connected to finding out the true state of capital goods. Some capital goods are unchangeably located (e.g. buildings) on a site, which is for many reasons inconvenient for the kind of economic activity for which the capital goods could have been otherwise used. On the whole, it can be said that the process of reallocation of excessive capital goods will take a longer term and in some cases, there does not have to be any reallocation whatsoever.

As mentioned earlier, the inferior combination of capital goods is not inefficiency in the strict sense of the word. Though, it is a very characteristic situation for transition economies. Its origin is, as in case of excessive capital goods, in the preceding coordination mechanism of the economy. Whereas some capital goods are found to be useless after a new set of relative prices is settled down (they become excessive capital goods), in most cases the firms find their capital structure to be only worse than optimal given the new relative prices and new technologies. But because the capital structure does already exist, the best the firm can do is to continue to use it and to adjust it only gradually as the former capital goods are depreciated.

Similarly for reallocated capital goods, which were transferred from other production processes, it is likely that they are technologically obsolete and that their

replacement costs are very high². However, the task that is solved by the impersonal market system is not allocation of a fictitious abstract “capital” with a given volume. Individual capital goods, which are more or less malleable, are in reality allocated. With regard to the usual rate of investment, size of total capital stock and durability of certain capital goods, it is clear that the inferior combination of capital goods can last in transition countries for more than a decade.

The interfirm capital allocation inefficiency is found, of course, in all economies but again there are certain reasons why it seems likely that this phenomenon is more important in transition economies. The basic reason is that there is a different situation in the field of financial intermediation. The sector of financial intermediation connects individual firms via the interest rate. If this sector functions well, capital resources can flow from firms with lower than average marginal product of capital towards firms with higher than average marginal product of capital. The spread between deposit and loan interest rates is given mainly by transaction costs and the market power of the intermediaries. Net marginal products of capital are not literally equalised by financial intermediation, but their difference corresponds to the spread.

In transition economies the spread is usually much wider because the banks face much higher risks. Higher risk premiums are due to a more volatile economic environment, to unsettled property structures in firms and also, they are due to defects in the institutional framework. Wider spreads imply that the tendency for equalising marginal product of capital is weaker in transition economies. Moreover, the credit market is not cleared, credits are rationed and this rationing takes place on the basis of the banks’ abilities to assess potential projects. I believe that these abilities are smaller in transition economies than in standard market economies, where the intermediaries have long-term experiences. This strengthens the hypothesis that financial intermediation contributed to equalisation of marginal products to a smaller extent in transition economies than in standard market economies.

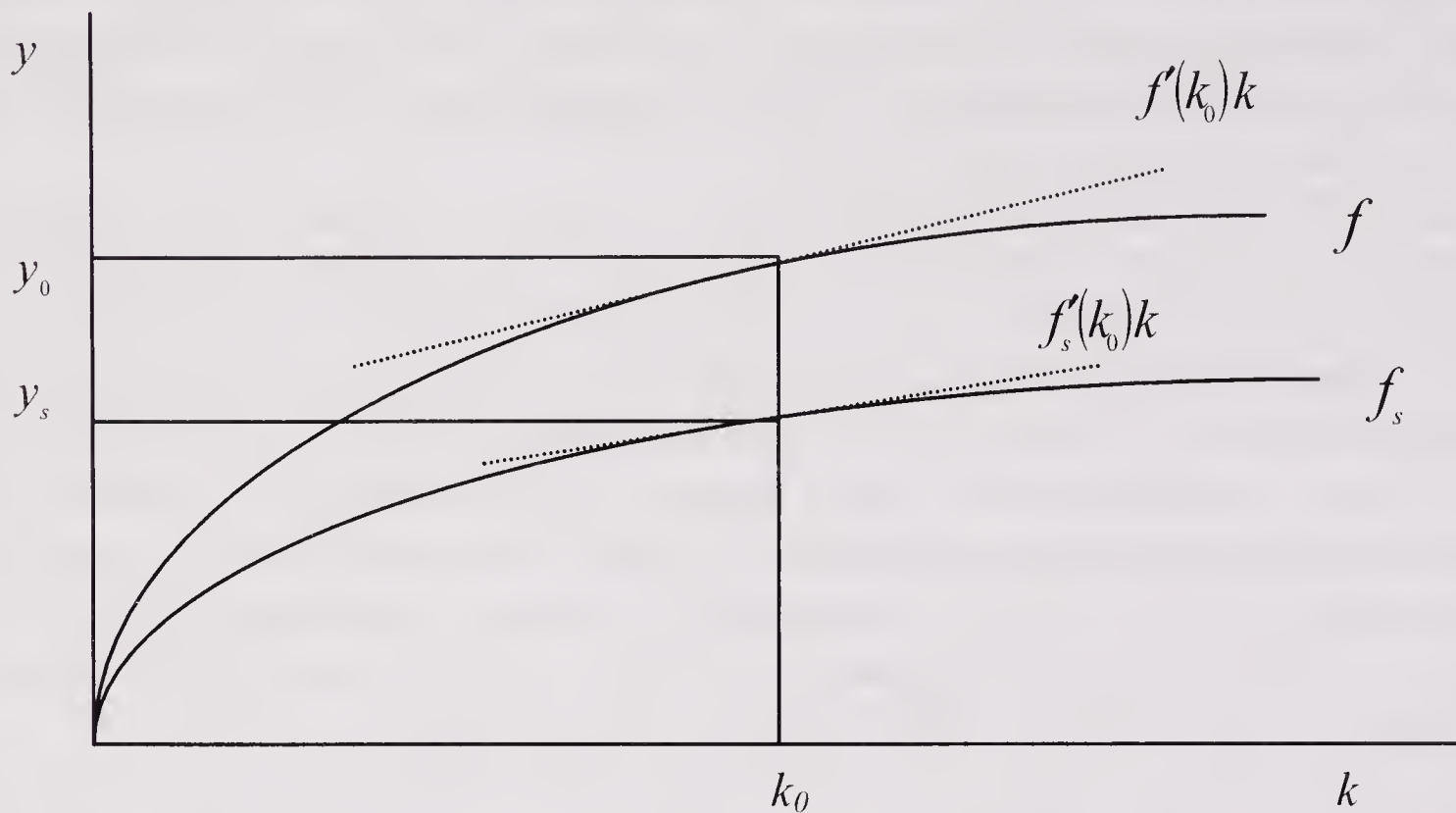
8. Capital allocation inefficiencies and economic growth

We can ask whether inefficient capital allocation has any effect on economic growth and, if so, in what direction. An answer to this question is not as straightforward as it might at first seem and it depends on a more detailed formulation of the problem.

Let us suppose for simplicity that despite aggregation problems we can describe the relationship between capital and output in the economy with imperfect allocation by means of an aggregate production function. Let f in the figure 4 stands for a production function with perfect capital allocation and let f_s stand for a production function in the real economy, i.e. in economy with imperfect allocation.

² In the case that existing capital goods are reallocated, they will be reallocated for prices lower than replacement costs. A given capital product is characterised by its replacement cost for the purposes of the production function, this price, however, is not relevant for an agent’s economic calculation if he or she is buying the product for a lower price.

Figure 4. Comparison of production functions in an economy with perfect and imperfect allocation



Obviously, given the capital stock k_0 , the output is higher in case of perfect allocation than in case of imperfect allocation, but we are interested in the implications for economic growth. Let y stand for output per unit of labour and let g and g_s stand for economic growth in case of perfect capital allocation and imperfect allocation respectively³. It follows that

$$g = \frac{\dot{y}}{y} = \frac{f'(k)\dot{k}}{f(k)} = \frac{f'(k)k}{f(k)} \cdot \frac{\dot{k}}{k} \quad \text{and} \quad g_s = \frac{\dot{y}_s}{y_s} = \frac{f'_s(k)\dot{k}}{f_s(k)} = \frac{f'_s(k)k}{f_s(k)} \cdot \frac{\dot{k}}{k}$$

Now there are different ways in which we can formulate the problem. We can ask what influence the inefficient capital allocation has on economic growth given the capital stock and given the volume of net investment, i.e. given $\frac{\dot{k}}{k}$. If the problem is formulated in this way, the relationship between g and g_s depends only upon the relationship between $\frac{f'(k)}{f(k)}$ and $\frac{f'_s(k)}{f_s(k)}$. However, in this case the inefficient allocation does not necessarily lead to lower economic growth. If $\frac{f'_s(k)}{f_s(k)} \geq \frac{f'(k)}{f(k)}$, then growth in the economy with imperfect capital allocation would be the same or higher than growth rate in the economy with perfect allocation.

³ Symbols with the dots stand for time derivatives of the corresponding variables.

There is no *a priori* reason why this inequality could not hold. Although it is true that given the capital stock k_0 , the marginal product of capital will be lower in the imperfect allocation case, on the other hand the output will be lower as well. Therefore, the question is whether the marginal product of capital will be more times lower than will the product be lower as compared with the perfect allocation product. Only then the imperfect capital allocation implies unambiguously lower economic growth.

Let us consider that the rate of capital allocation inefficiency is the same all along the production function in the following sense: for any capital stock k , the output is x times lower in imperfect allocation case than in perfect allocation case, where x is a constant and it is bigger than 1. Under this assumption we can write $f(k) = x f_s(k)$. However, then for the economic growth we get that it is the same in both cases:

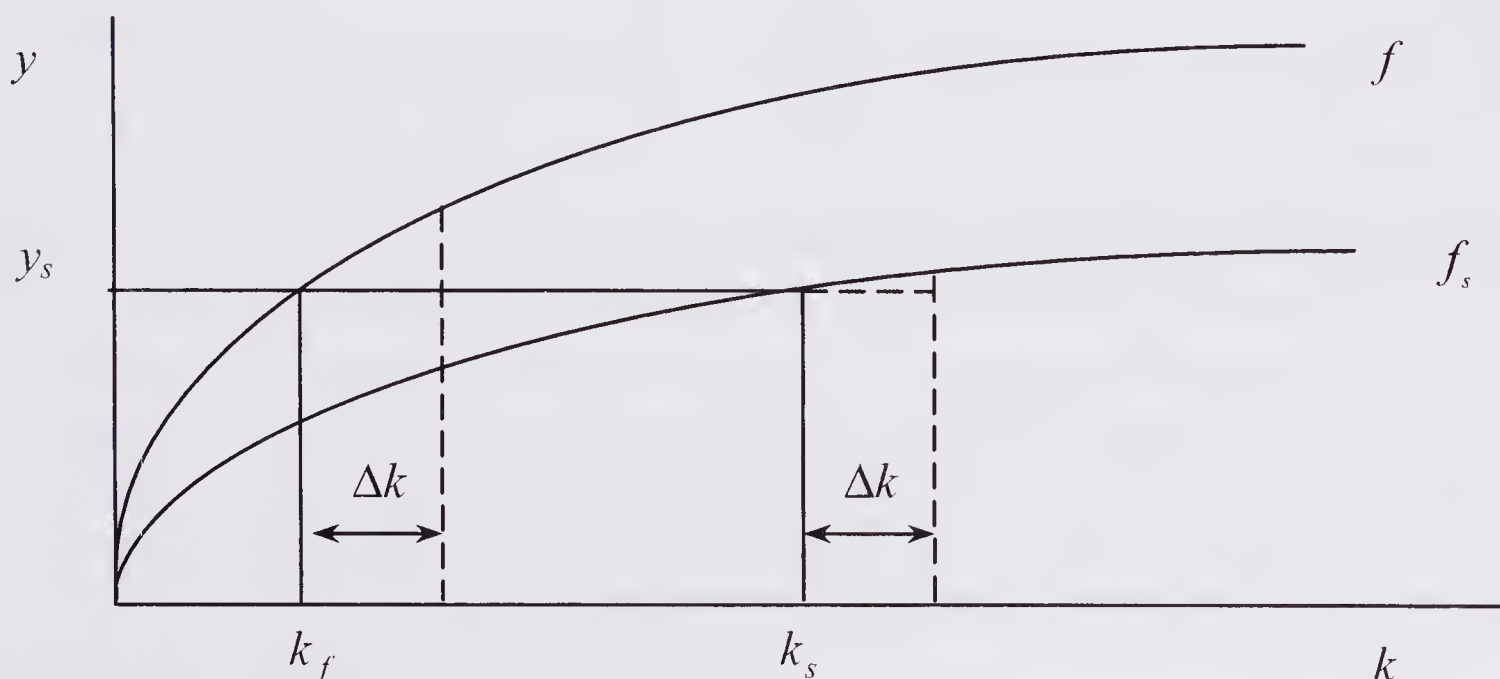
$$g = \frac{\dot{y}}{y} = \frac{f'(k)\dot{k}}{f(k)} = \frac{x f'_s(k)\dot{k}}{x f_s(k)} = \frac{f'_s(k)\dot{k}}{f_s(k)} = g_s.$$

This solution is a consequence of assumed constancy of x but because we do not have any *a priori* reason why x should be an increasing or decreasing function of k , it seems to be a reasonable assumption.

The fact that lower efficiency of resource allocation does not necessarily lead to lower growth may seem paradoxical, but of course, the paradox is only seeming and it belongs to the class of paradoxes (which are quite numerous in economics) resulting from an insufficient distinction between growth and state variables.

However, if the problem is specified slightly differently, we get a different solution. Let us suppose, as well as in the previous specification, that the volume of net investment Δk is given but instead of capital stock, it is the volume of output y_s that is given now. What will be the influence of the imperfect allocation on economic growth? This specification of the problem is illustrated in figure 5.

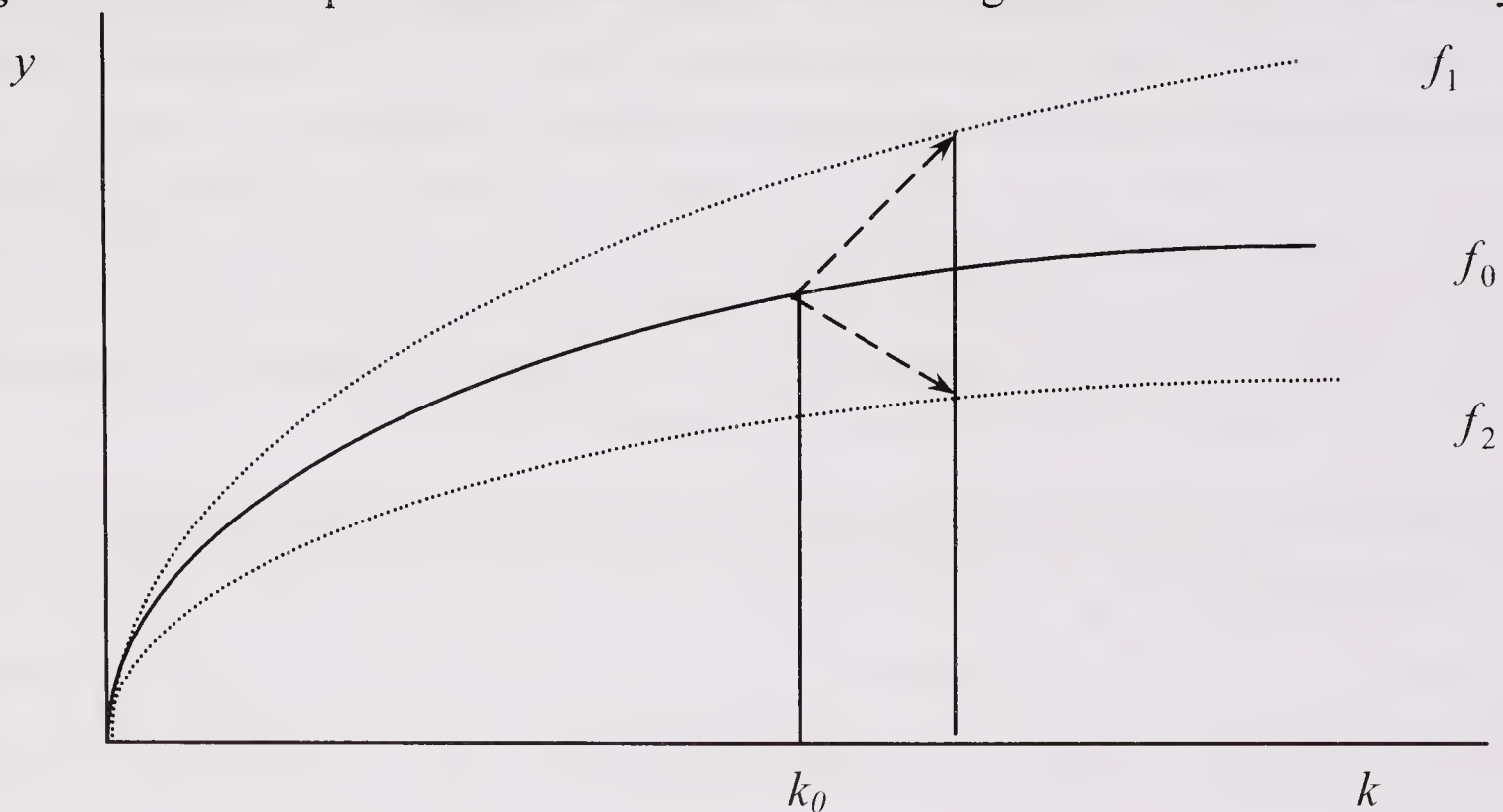
Figure 5. Difference in growth rates given the volume of initial output and net investment



In this case, economic growth is faster when there is perfect capital allocation because the marginal product of capital is higher while the volume of output is the same (by the assumption) and from this it follows that the relative increment of output is higher. The difference of growth rates would be even more striking if it is not volume of net investment but of gross investment that is given. For in such a case, net investment in the perfect allocation economy would be higher than in the imperfect allocation economy because the capital stock k_j necessary for production of y_s (fig. 5) is smaller in the perfect allocation economy and so is the depreciation of capital. Therefore, if gross investment and output are given, the growth rate of the perfect allocation economy is higher, not only because of higher marginal product of capital, but also because the volume of net investment is bigger. All this can be summarised in the following proposition: if the current volume of output were produced with perfect capital allocation, then the same investment would lead to a higher growth rate.

This is a different result as compared with the previous specification of the problem, which led to a conclusion that less effective capital allocation does not necessarily imply lower economic growth. Certainly, even this conclusion, however, does not mean that the capital allocation is irrelevant. What it means is that the capital allocation efficiency has mainly a scale effect: higher efficiency is connected with higher product and on the contrary, but not necessarily, with higher growth rate.

Figure 6. Shifts of production functions due to changes in allocation efficiency



If capital allocation efficiency changes, e.g. if it is increased (see figure 6, in which the increase of capital allocation efficiency is depicted as a shift of f_0 towards f_1), the growth rates will temporarily change too as the production is shifting to a higher level (in case the capital allocation efficiency is decreased then, of course, the growth rates will be smaller and the product will shift towards a lower level). After achieving the higher production function there is no longer any *a priori* reason for higher growth rates (again assuming the same volume of investment).

And similarly, in the case of a decrease in capital allocation efficiency – it can imply smaller or even negative growth rates. Low level of efficiency, however, probably does not cause low growth rates.

9. Conclusion

The aim of the paper was to classify capital allocation inefficiencies because the term “capital allocation inefficiency” is too broad and to discuss further sources of particular kinds of inefficiencies with a special regard to transition economies.

First, it is necessary to distinguish intrafirm and interfirm inefficiencies. Excessive employment, excessive capital goods and inferior combination of outputs are inefficiencies that belong to the intrafirm level. A special kind of inefficiency is inferior combination of capital goods. However, it is not an inefficiency in the strict sense of the word, it is inefficiency only with respect to the new set of relative prices and new technology, which were not expected in time when the combination of capital goods was installed. Maximising firms taking into account the existing capital stock and therefore, even given the maximising effort, the ratios of quantities of capital goods used for production are not “optimal” (optimal given the new relative prices) because the capital goods are not malleable. On the contrary, frequent arguments about insufficient “restructuring” and slow “modernisation” usually fail to take into account the existing set of capital goods and various proposals for the “modernisation” of the economy would usually lead to waste of scarce resources. Interfirm capital allocation inefficiency is implied by not equilibrating the net marginal product of capital.

There are some special reasons for worse capital allocation in transition economies in comparison with standard market economies. As far as the intrafirm allocation is concerned, weaker corporate governance is a characteristic feature in newly privatised firms and there is also a bigger portion of state-owned firms in most of the transition countries, at least at the beginning of the transition process. Moreover, liberalisation of prices and of trade led to dramatic changes in relative prices of both consumption and capital goods. As for the interfirm level, the capital allocation inefficiency is connected with peculiar reasons in the field of financial intermediation.

The answer to a question concerning the impact of capital allocation inefficiency on economic growth depends on a more detailed specification of the question. If capital stock and volume of investment (not rate of investment) are given, then inefficient capital allocation does not necessarily imply lower economic growth in comparison with perfect capital allocation. On the contrary, if we compare two economies with the same level of production and the same rate of investment (either gross or net), but with different levels of capital allocation efficiency, then the one with better capital allocation will grow faster.

References:

- Abramovitz, M. (ed.) (1959), *The Allocation of Economic Resources*, Stanford University Press, California.
- Gravelle, H. and Rees, R. (1992), *Microeconomics*, Longman, London.
- Harris, M. and Raviv, A. (1996), 'Budgeting Process: Incentives and Information', *Journal of Finance*, 51(4), September 1996, pp. 1139-74.
- Jehle, G.A. and Reny, P.J. (2001), *Advanced Microeconomic Theory*, Addison-Wesley, Boston.
- Jorgenson, D.W. and Yun, K.Y. (1986), 'The Efficiency of Capital Allocation', *Scandinavian Journal of Economics*, 88(1), pp. 85-107.
- Wurgler, J. (2000), 'Financial Markets and the Allocation of Capital', *Journal of Financial Economics*, 58(1-2), October – November 2000, pp. 187-214.

The Evolution of World Economic Recessions – Their Regularities and Consequences for Central and East European Countries' Development

Krzysztof Piech

The goal of the paper¹ is to present some of the so-called “stylised facts” connected with world economic recessions, especially with the length of a world business cycle and the regularities of its recession phases. It is also to prove that there is regularity in the occurrence of the world economic recessions, thus they can be predicted.

1. Introduction

The notion “recession” closely relates to a business cycle and is a phase of it. Further, in this paper I will concentrate on the chosen stylised facts of the so-called world business cycle, especially on their regularities of occurrence and – when it is necessary – on some reasons influencing it.

The stylised facts are the characteristics describing a business cycle. They are “stylised” because of no fixed and unquestionable, quantitative proofs. There are many different research results, as well as methodical approaches, to analyse a business cycle. They can refer to a cycle of a certain country, a group of countries, a region and to the world economy. One of the main stylised facts concerns the length of a cycle. Other characteristics include amplitude, frequency, pro- and anticyclical variables, leading and lagging variables, cyclical components, measures of the course of a cycle, its phases, turning points, synchronisation (of cycles, recessions), and a trend.

The idea of a world business cycle is to be used only with a certain restriction. There is a debate as to whether there is a world business cycle or not. It is well documented that there is, for example, the European business cycle (especially consisting of Euro zone countries), some other regional (Canada and the United States; Australia and New Zealand etc.) or international business cycles (see: Christodoulakis *et al.*, 1995; Artis and Zhang, 1997; Fiorito and Kollintzas, 1994). The so-called world business cycle is a weighted average of national business cycles (weighted with their share in the world GDP), and not a phenomenon of world economic rules.

That which is understood under this name does not refer to the whole world with all its countries, but only some of its parts. A process of growing synchronisation of the business cycles plays a crucial role in creating the world business cycle. It usually applied only to the most open economies. Later, it referred to the majority of countries, however in different scope and intensity.

¹ I would like to express my gratitude to those who gave me helpful comments on the topics presented: Prof Grzegorz Kołodko, Prof Barbara Polszakiewicz and Dr Krzysztof Marczewski.

2. An outline of evolution of business cycle studies

The author of the first theory of a business cycle, formulated in 1862 (after the crisis of 1857), was French economist, Clément Juglar (1819-1905). He was the first economist who found and described the regularity accompanying the growth and recession phases. The length of 'his' cycles was about 8.2 years.² According to Stanley Jevons (1835-1882), the business cycles in 1721-1872 were on average 10.46 years long, and were caused by sun spots. The cycles described by Henry Moore (1869-1958) had a similar length – eight years on average. In 1923, Joseph Kitchin (1861-1932) discovered shorter cycles, which were 39 months long. One of the most well-known business cycle researchers was also Nikolai Kondratiev (1892-1931?³). He elaborated in 1922 the theory of long term business cycles, known today (following Schumpeter's terminology) as "Kondratiev cycles". They vary from 45 to 60 years. A few times shorter were the "Kuznets cycles" (18.3 years, or from 16.5 to 20 years), discovered by Simon Kuznets (1901-1985), the Nobel Prize laureate in 1971. They were connected with the changes in population growth rates and migration.

Those lengths were approved by Johan Åkerman (1896-1982), who usually indicated the cycles' length as a multiplication, by two.⁴ His ideas were to some extent approved by Joseph Schumpeter (1883-1950), who was an author of a complex theory of business cycles, which were based on Kondratiev, Juglar and Kitchin cycles, taking into account inventions, as well.⁵

Later many economists followed those authors, contributing new elements explaining the reasons for cycles and recessions. One of these was John M. Keynes, whose theory was mainly influenced by The Great Depression (1929-33). Later, for example, Milton Friedman after having analysed 18 cycles in the United States after 1870 concluded that one of their reasons was money supply. As he argued with Anna Schwartz in their 'classical' work (Friedman and Schwartz, 1963), the major reasons for recessions (including The Great Depression) are monetary changes. In addition, Robert Lucas contributed to the understanding of economic phenomena by the notion: rational expectations. Because of two supply shocks in the 1970s, a need for revision of those ideas emerged. Thus since 1982 the real business cycle school has developed (Kydland and Prescott, 1982). Its representatives (e.g. Robert Barro, Sérgio Rebelo, Finn Kydland, and Edward Prescott) concentrate on real shocks. Their opinions are widely criticised however, for not respecting the monetary shocks. This school brought many new ways of analysing the cycles (e.g. models' calibrating, HP filter).

One of the latest new ideas on business cycles is a political business cycle theory, developed especially in the 1990s⁶. According to its representatives (e.g. Alberto

² There are different values of this kind of cycle, given in literature, usually ranging from 8 to 10 years.

³ Kondratiev was sent to a prison camp in Siberia in 1931. The exact year of his death is not known.

⁴ 1) Short seasonal changes (1/2 year), 2) long seasonal changes (one year), 3) agricultural cycles (2 years), 4) short business cycles (3-4 years), 5) long business cycles (8 years), 6) very long cycles (18 years), 7) secular changes (50-60 years), 8) periods of wars escalation (140 years), 9) long fluctuations of industrialisation processes (250 years). See: Rusiński (1973).

⁵ In his opinion, one Kondratiev cycle includes six Juglar cycles, and one 'Juglar' – full three Kitchin cycles.

⁶ However, its precursor is a Polish economist Michał Kalecki (Kalecki, 1943). Theory of the political business cycle was presented by Nordhaus (1975) and then by Hibbs (1977).

Alesina), the date of national elections influences the macroeconomic variables (especially economic growth, and also inflation; see: Gärtner, 1999), and may, for example, create fiscal policy cycles (Schuknecht, 1999). There was also a discussion on the role of central banks in the political business cycle (Sieg, 1997), particularly on the so-called Roland Vaubel's hypothesis (Vaubel, 1993) about partisan central banks⁷. Although economic policy may cause economic recessions (e.g. Mexico 1994/95), there is a little evidence that may influence the business cycle in developed countries on a larger scale.

A national business cycle, instead of four or five years (according to the political business cycle), lasts – according to the IMF (2002, p. 116) research results for 21 industrial countries – about six years in the 1980s and 1990s (four in the 1970s). Roughly, 40 percent of all cycles during those periods lasted more than eight years.

3. What is a recession? – a few definitional approaches

Business cycles can have different geographical ranges. As mentioned above (with all the restrictions), there are national (relating to one country), international, and regional business cycles as well as a world one.

In order to describe the recession, it is necessary to define the business cycle as a whole and to establish borders between different phases of a cycle. There are two main approaches distinguishing the business cycle phases:

- The European approach – business cycle consists of four or five phases (e.g. crisis, depression, recovery (revival), expansion, prosperity), and
- The American approach (supported by the National Bureau of Economic Research) – with only two phases: recession and expansion.⁸

Because of the differences in business cycles' definitions, there are also differences in definitions of recessions.

There are three major definitional approaches to the term “recession”:

- 1) The European definitional approach – a recession is a drop of real GDP in two constitutive quarters,
- 2) The American definitional approach (i.e. mainly used by NBER) – a period from peak to trough of a business cycle, where these points are indicated by a composition of several economic variables;
- 3) The Japanese definitional approach – a recession is defined in accordance with countries specific variables, especially real GDP growth rate.⁹

Another interesting definitional debate is a distinction between two terms: economic “recession” and “crisis”. It is usually accepted that a crisis is a deeper form of a recession.¹⁰

⁷ See: Berger and Voitek (1997) and the response for their arguments: Vaubel (1997).

⁸ However IMF in its last WEO report, under typically strong influence from the NBER side, distinguished also the period of “recovery” – the time it takes for output to return to its previous peak. Ibidem, 116-117.

⁹ This definition mixes two other definitions: it approves American treatment of a cycle as a unique phenomenon, additionally using quarterly real GDP as a proxy measure for aggregate economic activity, as it is usually used in Europe (and also by IMF).

¹⁰ According to the authors' methodology, economic crisis is a fall of real GDP in at least one year.

Further hesitation is connected with the way of measuring the length of a business cycle. According to a traditional approach, it is measured from the beginning of a recession. Other approaches promote a beginning of a revival phase. NBER measures the length both between peaks as well as troughs of a business cycle. Further in the article, measurement was taken from the trough to the following one, as there can be many peaks of growth cycle and because recessions occur less often and with a greater regularity than the phases of expansion or peaks. The business cycle will be based on growth rates instead of changes of nominal values (Zarnowitz, 1992). It is also assumed that a business cycle is measured by annual (because of the lack of more detailed data) real GDP growth rates (as in the European and the Japanese approach).

4. World economic recessions in pre-war period

Early works on world recessions are concerned with the financial crises in individual countries. Charles Kindleberger (1999) dates the first of these to the years 1618-23. These took place after the Thirty Years' War in the Holy Roman Empire and between 1636-1637 in the Republic of Holland, after speculations of the Dutch East India Company stocks, real estate and rare tulip bulbs (see e.g.: Kindleberger, 1999, p. 386). There were other financial crises also, such as the money crisis in England in 1696, speculative crashes in 1720 induced by the cheating operations of John Law in France, the trade crises in Hamburg in 1763 and 1799, crisis in 1815 in England and in the United States, which were described by Wirth (Mendelson, 1959, p. 171-172).

According to Kindleberger there were the following financial crises: in 1720, in 1763 (also in Prussia, Holland and Scandinavia), in 1772 in Amsterdam, England, Scotland, Sweden, Russia, in 1793 in England and France, in 1799 in Hamburg and Liverpool, in 1810 in England, in Hamburg and in New York. They were caused mostly by speculations with goods and stocks. They were local – limited only to one country or even some of its parts, but the phenomena of financial crisis spillover was noticed.

According to Lev Mendelson, the financial crisis in 1825 (named by him as the first crisis of global overproduction) had an international character, but not a global one (Mendelson, 1959, p. 159).¹¹ Before 1825 there were only local (i.e. national) or international recessions, e.g. 1810, 1815, 1819, mainly in England. After 1825, international economic recessions occurred in 1836, 1847. World economic recessions started from the year 1857¹², and the next one was in 1866.

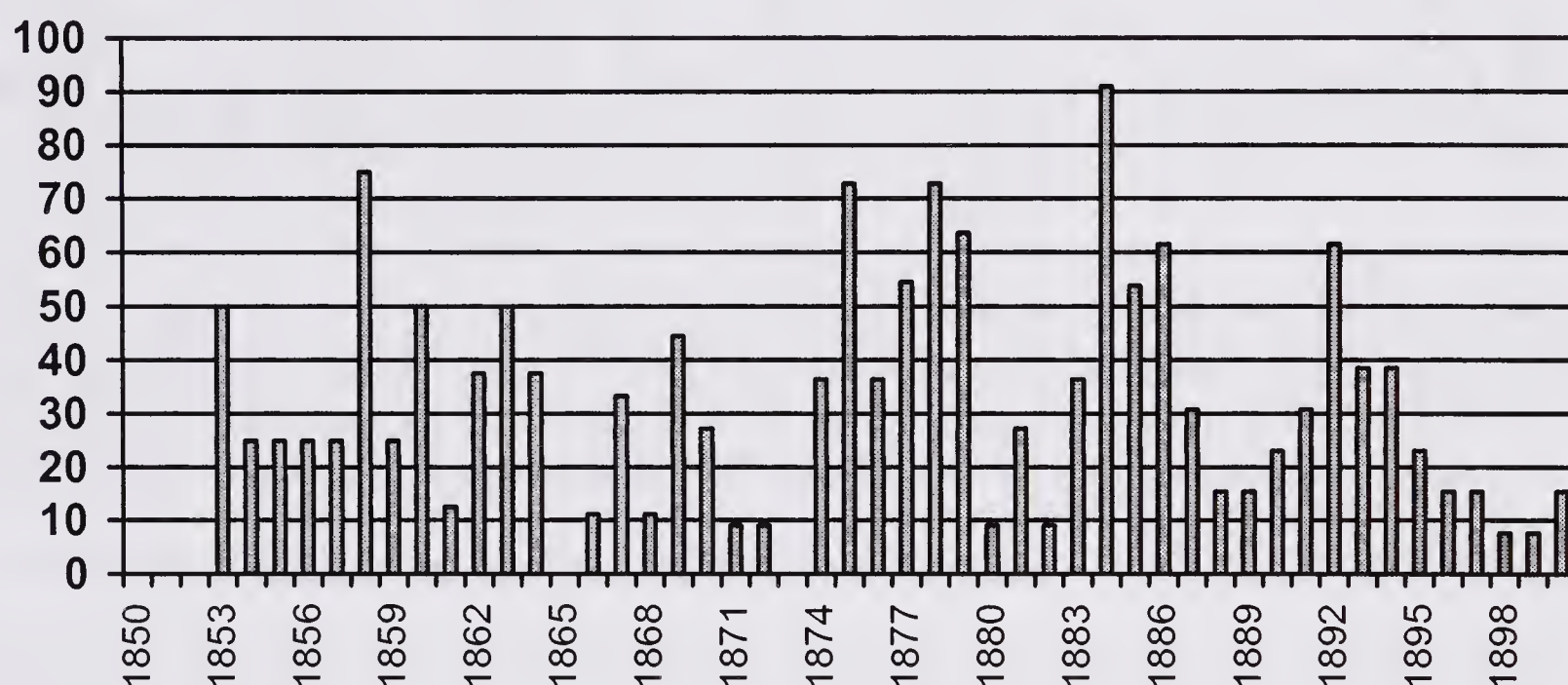
¹¹ The difference between these two types lies in the range of countries, which suffered the crises. Mendelson often used the term: world economic crisis. According to author's research results and author's definition of a crisis, that was a mistake. The proper name should be world (or sometimes only international) financial crisis. Further in the paper, the author finds that there were world economic recessions instead of crises, because they not connected with a fall of world GDP but only with a drop of the real GDP growth rate. Where possible, the author tried to estimate the world GDP to identify the periods of recessions.

¹² According to Mendelson, that was the first crisis in the history of capitalism, which was not only of an international character (like in 1847), but world character (Mendelson, 1959, p. 614).

Thus, we can observe the differences among historical economists as far as the dates of the first world economic recessions are concerned.¹³ As one of the best Polish economists in this field, Barbara Polszakiewicz has written: the works of Mendelson and W. W. Rostow are very close. The only big difference referred to the years 1854 and 1857. However, J. A. Estey did not note the emergence of crises of the world economy in 1847 and in 1866; these were – according to him – the dates of the English crises only (Polszakiewicz, 1989, p. 190).

The year 1873 was one of the most important, from the point of view of the course of the world financial crises. According to Mendelson (1959), the world recession in 1873-75 was the deepest in the nineteenth century, and only the crash started in 1929 exceeded the devastating results of this recession (thus it is often called The Great Recession). The next world economic recessions were in the following years: 1883-84, 1892-93, and 1902, and later in 1908 and 1914, usually one or two years after the financial crises.

Figure 1. Synchronisation of nominal GDP fall, 1851-1900 (in percent of countries)



Note: the sample consists of a different number of countries: period 1850-60 only four (Great Britain, Germany, France, Denmark), period 1860-64 eight (plus Italy, Sweden, Finland, Australia), 1865-69 nine (plus Norway), 1870-84 eleven (plus United States and Canada), 1885-1900 thirteen (plus Japan and Russia). The data presents changes of nominal GDP only.

Source: own calculations based on NBER (2001).

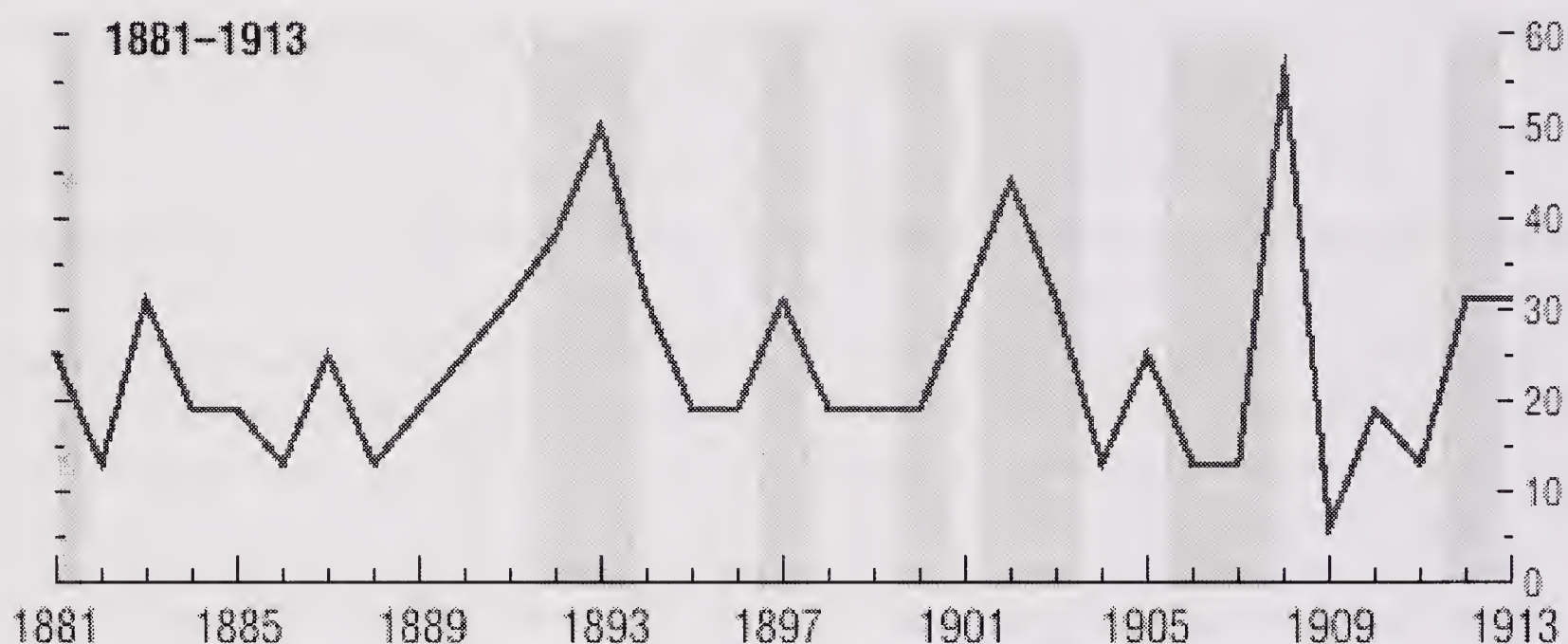
All these opinions should be verified by the statistical data. Due to the lack of them, it is usually very difficult to do this. Even having the national data for some of the largest countries, it is difficult to draw a course of the world business cycle.

¹³ It should be reminded that because of the lack of proper data (of world and even national real GDP of the most important countries) it is not possible to indicate the dates of world recessions clearly. The author did it based only on a review of literature.

As can be seen, the dates of national crises do not always cover the dates indicated by historical economists (although the question of reliability of the data remains). According to some data, the frequency of recessions can be presented as in figure 1.

If the periods of higher synchronisation of national 'crises' (defined by nominal terms only) may be the periods of world (or at least international) recessions, the following dates should be indicated: 1858, 1875, 1877-79, 1884-86, and 1892. Those results differ from the historical descriptions or IMF estimates, which show that the global downturns were in the early 1890s, the early 1900s, 1907-08 (IMF, 2002, p. 112).

Figure 2. Synchronisation of recessions, 1881-1913 (in percent of countries)



Notes: the sample consists of 16 countries: Australia, Canada, Denmark, Finland, France, Germany, Italy, Japan, Norway, the Netherlands, Portugal, Spain, Sweden, Switzerland, United Kingdom, and the United States. The shaded areas indicate the years when the United Kingdom was in recession.

Source: IMF (2002, p. 112).

IMF (2002) used a different sample of countries as well as data, thus influencing the differences between these two charts (fig. 1, 2). It is surely not possible to approximate the course of the world GDP using those two charts. By doing so, there would be an assumption that the size of all the countries (and their share in world GDP) in a sample is the same (surely not true).

After the crisis in 1890, the phenomena of monopolisation escalated, leading to the shortening of the so-called world business cycle from the period of 10-11 years (nineteenth century) to 7-8 years (the beginning of the twentieth century).

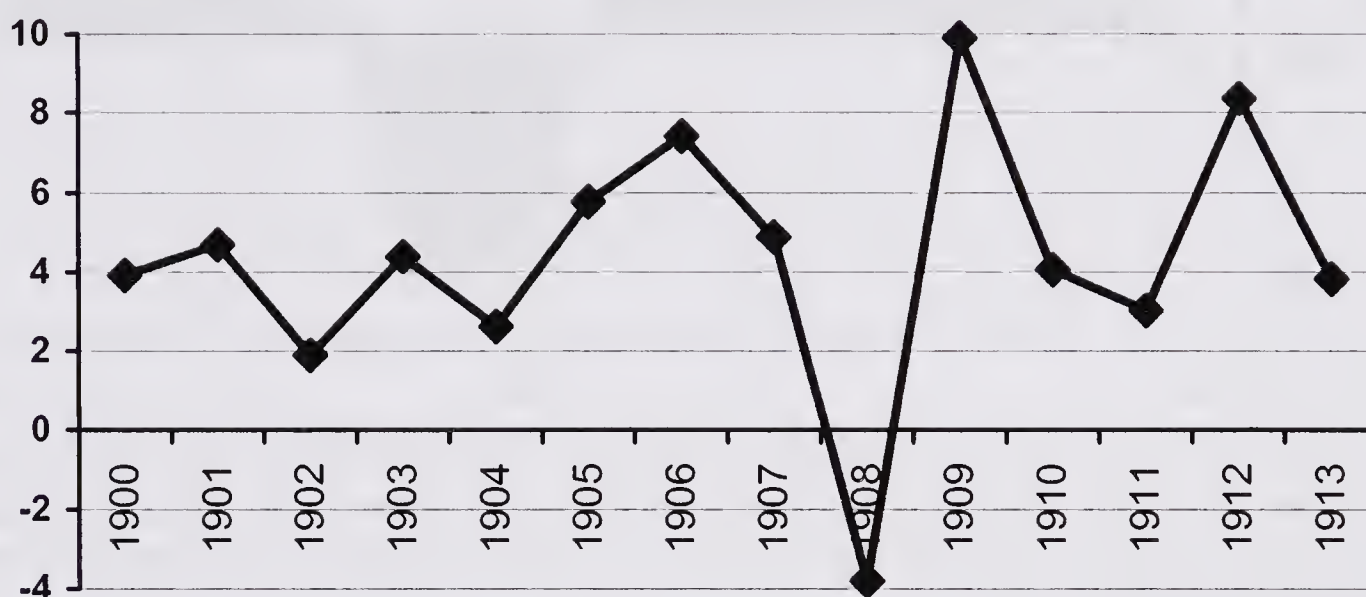
Due to the lack of yearly data about the course of the pace of changes in world GDP, it was necessary to do some estimating.

The available and comparable data for five of the most developed countries in the world were weighed with their share in world industrial production between 1910-1913 (see fig. 3).¹⁴

¹⁴ Estimations on a longer period i.e. after the World War I was not possible, because of too large a variety of data (provided by NBER, 2001) sources, making the use of comparable data impossible.

The calculations give the result that in 1908 in five of the largest countries of the world an economic contraction occurred. They produced *c.* 78% of world industrial production at the time. Thus, it can be said, with high probability, that there was a world recession in 1908 (see also fig. 2).¹⁵

Figure 3. Approximation of nominal GDP dynamics of five countries between 1901-1913 (in %)



Note: The estimated indicator is a weighted average of nominal GDP of the following countries: United States, France, Great Britain, Russia and Germany.

Source: own calculations based on: NBER (2001).

The world economic recession occurred also in 1914.¹⁶ It is worth noting that the world financial crises in 1907 and 1913 resulted in the occurrence of global economic default the following year.

5. World economic recessions in interwar period

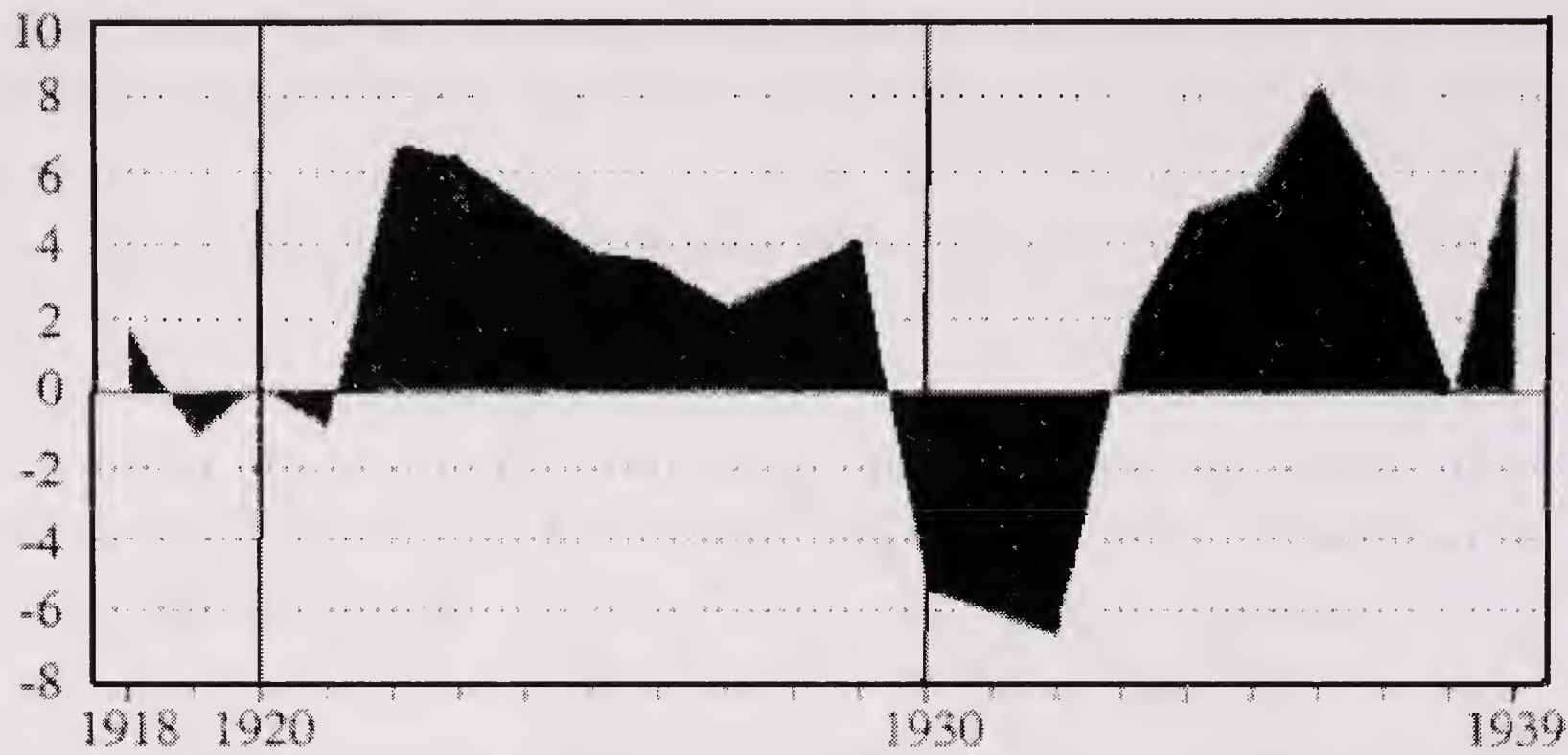
The next world financial crises started in 1920, 1929 and 1938. There is no doubt that there was a world recession of 1921 (although it can be questioned as to whether it appeared in 1920; see fig. 5 and fig. 4). The Great Depression of 1929-33 was not only a world recession, but can also be called – one of the few – world economic crises. Counting it in terms of a drop of world GDP, it lasted from 1930-1932 (or up to 1933; see fig. 5 vs. fig. 4). It is sometimes forgotten that there was also a world economic recession just before World War II – in 1938 (see fig. 4 and fig. 5). Thus, there is quite a good consensus among economists on the dates of world recessions in the interwar period (especially in comparison to the previous period).

Due to the difficulties with the access to the statistical data for the two world wars or the lack of it, there are no approximations of the world GDP for this period given.

¹⁵ It can also be confirmed by the values of GDP of 13 of the most developed countries (not shown here) that only two of them (France and Russia) did not account for the fall of GDP. See: NBER (2001).

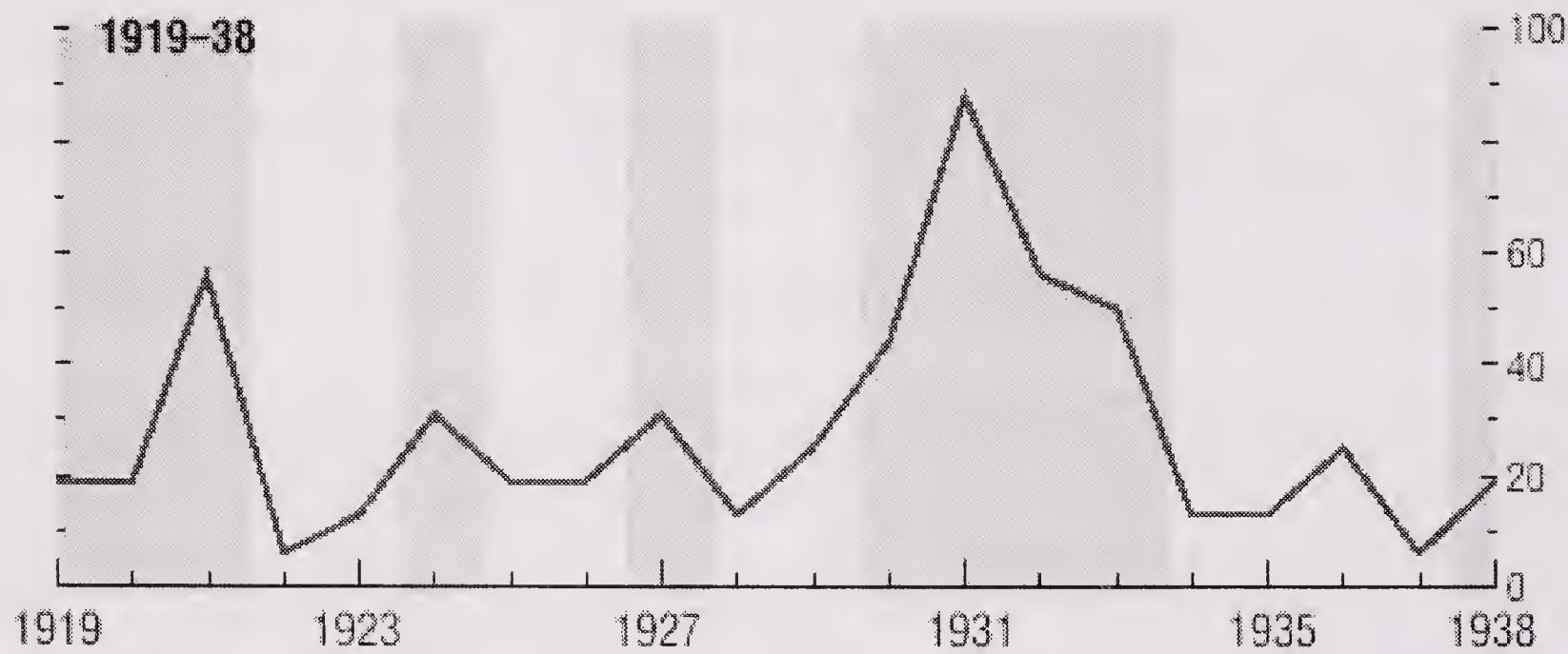
¹⁶ From a sample of 13 countries in only one (Australia) the GDP had grown. See: Ibidem.

Figure 4. Average nominal GDP of 16 countries, 1918-39



Note: The estimated indicator is a weighted average of nominal GDP of the following countries: Australia, Austria, Belgium, Canada, Denmark, Finland, France, Germany, Great Britain, Italy, Japan, the Netherlands, Norway, Switzerland, Sweden and United States.
Source: Morawski (1994, p. 31).

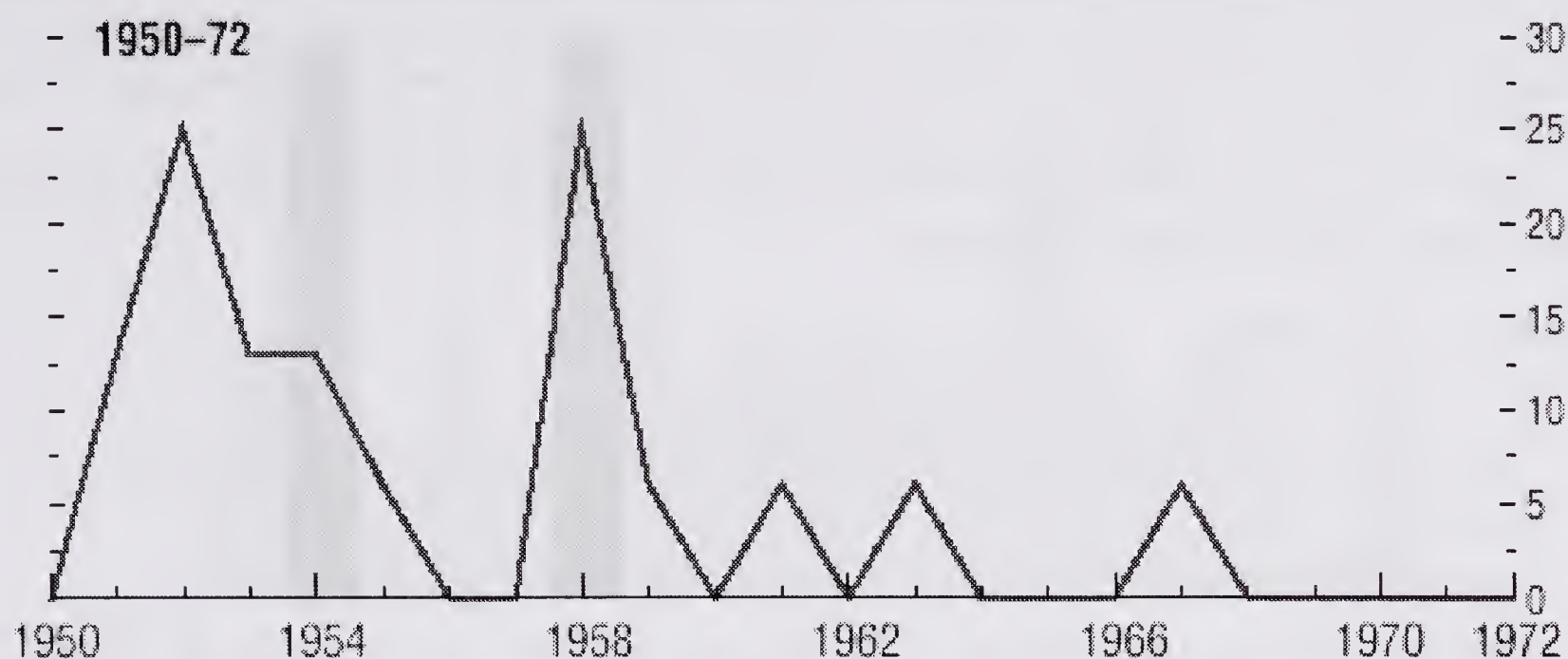
Figure 5. Synchronisation of recessions, 1919-38 (in percent of countries)



Notes: set of countries as on fig. 2. The shaded areas indicate the years when the United States was in recession.
Source: IMF (2002, p. 112).

6. World economic recessions during the Bretton Woods period

Similar calculations of synchronisation of the recessions in 16 countries were made by the IMF (2002) for the period 1950-72 (figure 6). It can be seen that there were world-wide recessions in 1952 and 1958, but it should be noted that they were less common (in a number of countries) as previously. Thereafter the decade of the 1960s was without a world-wide recession.

Figure 6. Synchronisation of recessions, 1950-72 (in percent of countries)

Source and Notes: see fig. 5.

As many economists accept, such a phenomenon was caused by the use of a proper economic (stabilisation) policy based on the Keynesian doctrine in many advanced economies. Another explanation can be the functioning of the Bretton Woods system, which was established, among others, to stabilise the world economy and to prevent the occurring of the world economic recessions, having in mind the Great Depression.

Similarly, as in the previous periods, the synchronisation of recessions is not the best way to estimate the dates of world economic recessions (defined according to the world GDP).

The author tried to estimate the course of world GDP after World War II. It was done based on information from the International Financial Statistics database (IMF, 2000b). The set of data of GDP in constant prices as in 1995 was chosen. The sample consisted of 25¹⁷ of the most developed¹⁸ economies in 1977.¹⁹

¹⁷ They were as follows (in accordance from the largest economy, a year from which the data was available is indicated in brackets): United States (1948), Japan (1956), Germany (1960), France (1950), Great Britain (1948), Italy (1960), Canada (1948), Spain (1954), the Netherlands (1956), Brazil (1963), Australia (1960), India (1950), Mexico (1948), Sweden (1950), Iran (1966), Belgium (1953), Argentina (1951), Saudi Arabia (1968), Switzerland (1948), Turkey (1967), Indonesia (1958), Austria (1964), Denmark (1950). The sum of their GDP in 1995 accounted 83% of the world GDP (79% in 1970) at market prices.

¹⁸ According to the values of GDP in dollars in current prices taken from: IMF (2000a).

¹⁹ With the exemption of China and Poland. It was due to the unavailability of data for China, because it started in a used database not before 1978, and for Poland – in 1994. Willing to avoid some serious corrections in world GDP data and because of the goal of calculations, the year 1977 was chosen, and those two countries were not taken into account. It should be also noted that in this database there were no data for the Soviet Union.

Only 25 (or properly: 23) countries were chosen, although it was possible to choose more. However, the next country in a “ranking” in 1977 was Yugoslavia, but it was not included in IFS IMF. Czechoslovakia took 31st place, which was also not included in the used database, and the 35th was Romania (with a restriction the same as for Poland, but the data were from 1980). The elimination of these countries and abandoning the other, does not guarantee that the estimations of the annual changes of world GDP in an analysed period will be better.

Due to the necessity of counting the weighted average (not the arithmetic one), the annual changes of GDP of certain countries counted from one-base data had to be weighted with the share of a certain country's GDP in a sum of GDP of analysed sample of countries. Further, the "weighted" GDP obtained were added.

More precisely presented, the GDP sample in constant prices between 1949 and 1979²⁰ were approximated as follows:

$$GDPs_t = \sum_{i=1}^n GDP_{i,t}^*,$$

where: $GDPs_t$ – the change of real GDP of the whole sample of countries in a year t ,

$t = \{1949, \dots, 1998\}$, i – indicator of a country, $n \in \{1, 2, \dots, 23\}$ ²¹,

$GDP_{i,t}^*$ – the change of real GDP of a country i for the year t weighted with its share in sample's GDP and were calculated:

$$GDP_{i,t}^* = GDP_{i,t} \cdot \frac{GDP_{i,t}^{**}}{GDPs_t^{**}},$$

where: $GDP_{i,t}$ – the change of real GDP of country i in the year t ,

$GDPs_t^{**}$ – nominal GDP of a sample of countries in the year t , calculated as:

$$GDPs_t^{**} = \sum_{i=1}^n GDP_{i,t}^{**}, \text{ and } GDP_{i,t}^{**} \text{ – nominal GDP of country } i \text{ in the year } t;$$

$GDP_{i,t}$ was counted through a simple bringing of $GDP_{i,t}^{IFS}$, i.e. the one-base series (1995=100) of GDP of country i to the chain series (there was lost one value from the first year), and this value was taken from the IFS IMF database;

$$GDP_{i,t}^{**} = GDP_{i,1995}^{**} \cdot GDP_{i,t}^{IFS},$$

where: $GDP_{i,1995}^{**}$ is of course the nominal GDP of country i in the year 1995.

The results of calculations are shown in the next figure (fig. 7).

Comparing the data obtained for the period 1970-77 with the data for all IMF member countries (WEO database) some differences can be noted, thus the results shown are only the trial of approximation of the world GDP.²² The results shown do not vary much from those by Morawski (1994, p. 31).²³

²⁰ It was also possible to count the values for the next years, but it was not justified, because of having those data in the IMF's *World Economic Outlook Database*.

²¹ In many of the starting years of a series, due to the lack of proper data, less than 23 countries were taken into account.

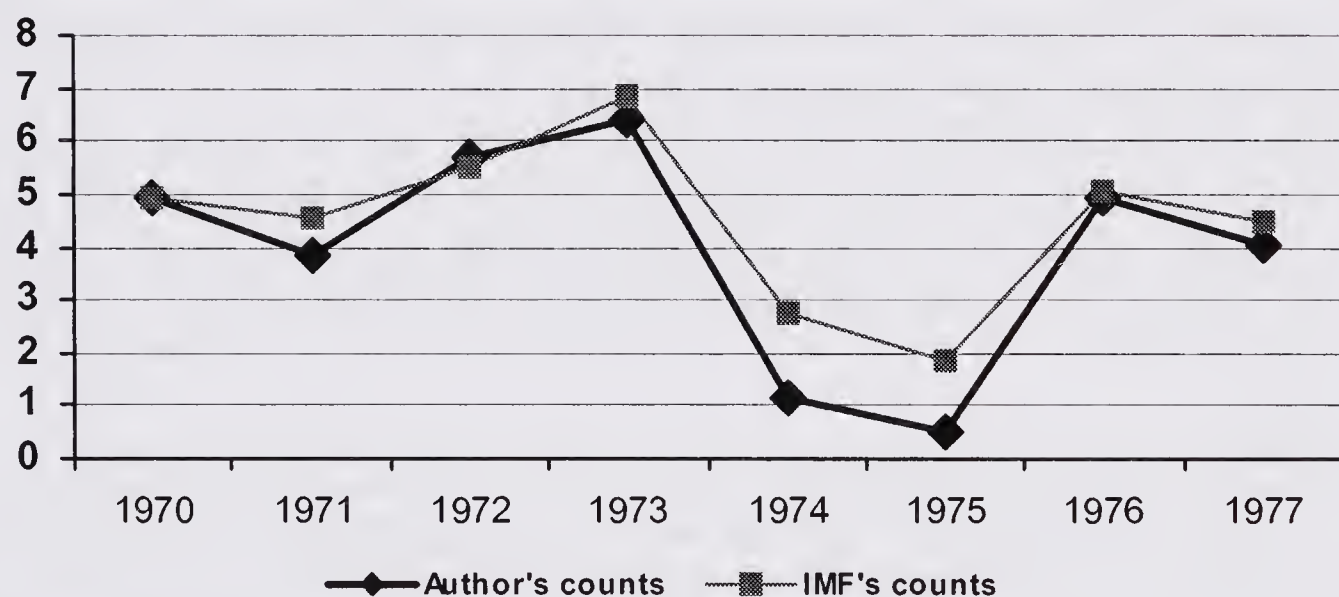
²² Recounting these differences into per cents (not percentage points), the size of differences were as follows: for 1975 – 73% (1.85% from WEO against 0.5% according to the author's approximations, thus 1.35 p.p. of difference), for 1974 – 58% (2.75% in WEO; 1.15% – author). In these years there was the world economic recession. The differences may be explained by the content of the sample of countries – the values obtained are lower than for the sample of all countries (WEO IMF), so the studied 23 most

Figure 7. Average real GDP of a sample of countries, 1949-1977 (in %)

Note: The estimated indicator is a weighted average of GDP of the 23 largest world economies. Other notes: see in text.

Source: own calculations based on: IMF (2000a, 200b).

Thus the author's way of approximation of world real GDP for 1970-77 shows (fig. 8) that the method used for the period 1950-1970 is good enough at least to indicate possible dates of world economic recessions.

Figure 8. Differences in approximations of world real GDP (in %) in 1970-1977

Source: see fig. 7 and IMF (2000a).

developed countries suffered a deeper recession than the rest of the countries. The next differences are: 1971 – 16%, 1997 – 11% (again the values are lower than in WEO IMF), and the rest – under 10%.

The explanation given above is not the only possible reason for differences: the IFS and WEO databases – although they are from the same institution (IMF) – differs.

²³ The most important differences in results are: smaller growth of GDP in 1949 (caused probably by the content of a sample – only five countries), the peak of a short business cycle in 1950 (according to Morawski in 1951), different direction of GDP in the period 1955-56, and greater growth of GDP in 1959, and 1968.

After World War II, a typical post-war default occurred, connected with the devastation of many economies (especially where war activities were conducted, e.g. in Europe) and the necessity of transition from military production to a civil one (so-called “reconversion crisis”).²⁴

Approximation of the world GDP shows that there were recessions in 1949, 1954, and 1958. According to the IMF’s estimations (fig. 6), the world-wide recessions could have been in 1952 and 1958, but in 1954 the recession appeared in the United States rather than in the rest of the world. The US influenced the world GDP in 1952, but has not induced many recessions all over the world.²⁵ Thereafter was a decade of quite permanent economic development (the so-called ‘golden’ 1960s)²⁶, which ended with a slowdown in 1970.

It is difficult to find such regularities after World War II, as before. Thus, the Bretton Woods period is often called the period of the world business cycle desynchronisation (Sokołow, 1964).²⁷ It means countries developed more independence than before World War II.

Some other causes of changes are also indicated in a business cycle course. The most frequent is the thesis about a shortening of the business cycle: from 8-10 years to 3-4 years, and it is usually proved by (usually only!) the most developed countries like the United States, Great Britain or Germany. Not everybody shares this idea.²⁸ Recessions in the Bretton Woods period became milder but not shorter.²⁹

7. World economic recessions in the post-Bretton Woods system

After the default of the Bretton Woods system, due to the growth of oil prices, the first oil crisis occurred. It restored the regularity of the world business cycle and lengthens their duration to middle-sized (Juglar) cycles.

The next world recession lasted from 1974 to 1975. These years were very important from the theory of crises spillover’s point of view, confirmed by economic events from 1979 (next oil price growth) resulting in a recession in 1980-82. The sample of 16 countries used by IMF (2002) indicates that over 35% of those countries

²⁴ It can be assumed that during World War II and in 1946, world economic recession (or even crisis) occurred, but its scale is difficult to estimate because of the lack of data or the incomplete international statistics. This recession had not a cyclical character, thus it cannot be taken in account as a regular world recession (although it significantly influenced the course of business cycles in the following periods).

²⁵ The question of definition of world economic recession can be raised again: if it deals only with world GDP or the geographical scope of recessions. With increasing synchronisation of business cycles there will be more regularities in world recessions’ occurrence, which justify an approach based on world GDP.

²⁶ The recession in 1958 is broadly accepted, only sometimes the recession in years 1967-68 is noted.

²⁷ Although Zarnowitz (1992) found that growth cycles in major industrial countries were highly synchronised throughout 1948-80.

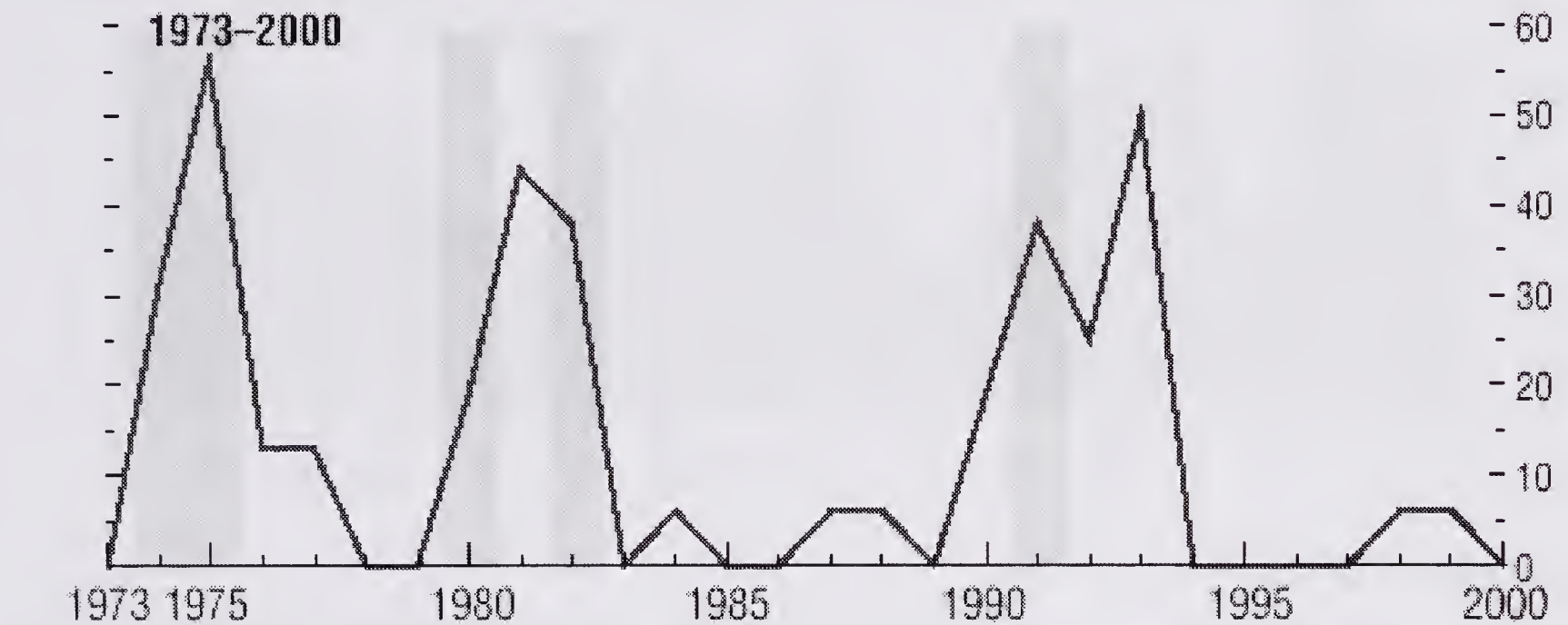
²⁸ According to B. Polszakiewicz, her “empirical research results give evidence that the period of the post-war cycle vary from 7.5 to 10 years. Many indicate also that the crises in 1957-58, 1967-1968, 1974-1975 and 1981-1982 were world-wide.” (Polszakiewicz, 1989, p. 189).

²⁹ However, “expansions were especially long, lasting about 10 years on average. Some expansions lasted 20 years, and several countries did not experience a year of negative output growth at all. (...) even though average growth rates were similar in the prewar and post-Bretton Woods periods, recession years were less common in the later period...” (IMF, 2002, p. 109).

also suffered a recession in the years 1981-82, while more than 50% in 1975 and 50% in 1994 (fig. 9).

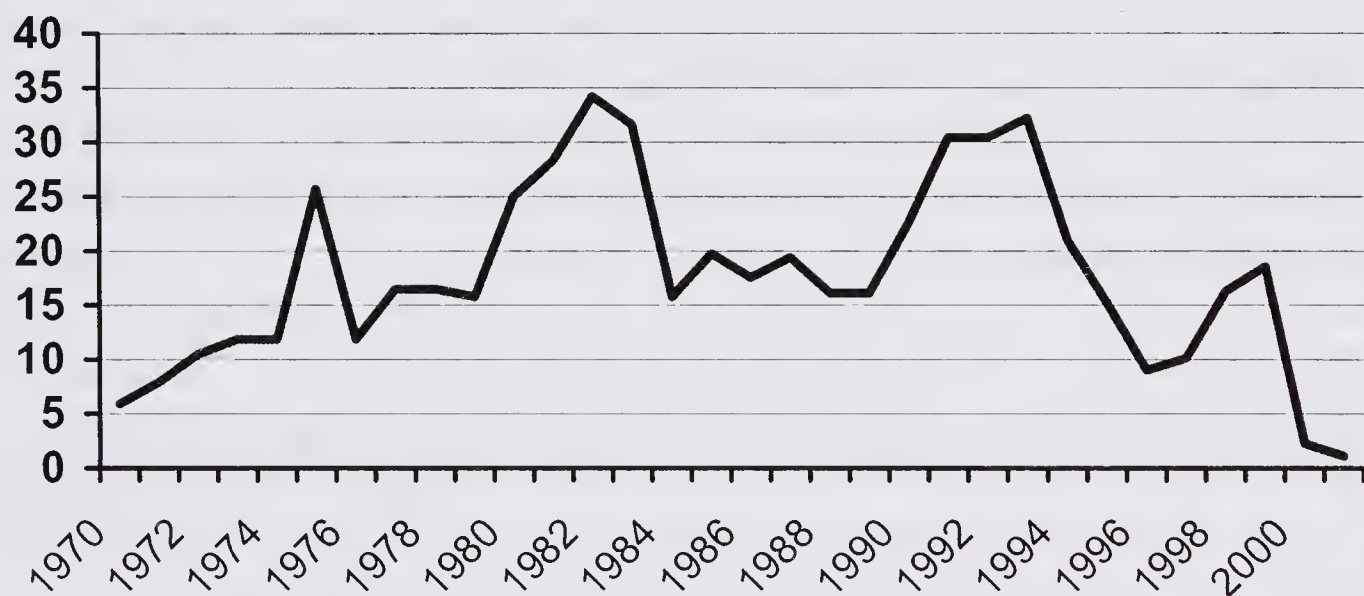
Based on the sample of IMF's 16 countries, it should be noted that the world-wide recession of the early 1990s lasted in 1990-1994 (or taking the 'heuristics' used by IMF of 50% of countries – only in 1994).

Figure 9. Synchronisation of recessions, 1973-2000 (in percentage of countries)



Source and Notes: see fig. 5.

Figure 10. Synchronisation of recessions, 1970-2001 (in percentage of countries)



Note: The sample consists of 178 countries. Data for 2001 are the forecasts.

Source: own counts based on: IMF (2000a).

Looking closer at the synchronisation of national crises the following periods of world-wide recessions can be indicated (using heuristics of 25% of countries): 1975, 1980-83, 1991-93. As it can be seen, these periods are not the same as the dates occurring in economic literature.

World economic recession was defined as a significant slowdown of the world real GDP growth rate. Although it is not a precise definition, it is commonly accepted that during the last three decades there were three world economic recessions: 1974-75,

1980-82, 1990-92 (see: figure 10). There was also a 'growth recession' in 1998 due to the Asian financial crisis in 1997 as well as the Russian crisis in 1998 (fig. 11).

Figure 11. World real GDP in the period 1970-2000 (in %)



Source: IMF (2000a).

There are a few ways of defining a world recession. Due to the lack of quarterly data, it is impossible to base it on the European definition of recession. Thus, one of the ways can be a "simple observation" (used above). A 'heuristics' can also be used to indicate how large the fall of GDP should be to treat it as a world recession, but this approach needs human intervention³⁰, rather than an objective, qualitative way. It was possible in the European definitional approach to compare the countries. However in the case of the world, it is not possible to compare the data related to it with other worlds. Thus, it is justified to create a unique definition of the world recession (as in the Japanese definitional approach).

Another way can also be employed, using more sophisticated, quantitative methods. One of them is the Hodrick-Prescott Filter (Hodrick and Prescott, 1980), used usually by the representatives of the Real Business Cycle School of economic thought. The use of any kinds of quantitative filter is more objective than the use of heuristic techniques. One of the results used to identify the cycles of the world GDP is shown in figure 12.

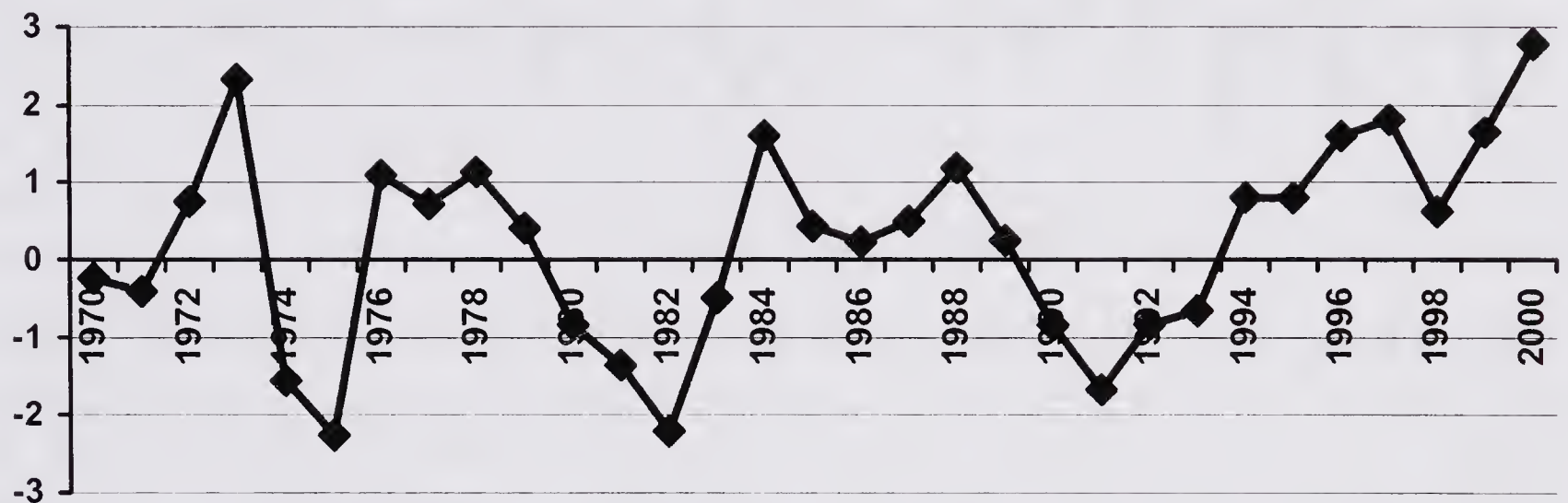
Assuming that the zero-line will indicate the deviations from trend obtained with the use of the HP filter, world economic recessions were in the following years:

- 1970-71, but it should be noted that the course of world real GDP does not confirm it (see fig. 4 and 5), because HP Filter uses the relative values, i.e. compared to the trend;
- 1974-75 (the First Oil Crisis),

³⁰ For instance, assuming the 20% fall of the rate of real world GDP growth, world recessions would be in the following years: 1974-75, 1980-82, 1985, 1989-91, 1998.

- 1980-83 (after and as a result of the Second Oil Crisis started in 1979, which negative effects ended three years later causing in 1982 the world debt crisis of the developing countries, especially of Latin America),
- and 1990-93.³¹

Figure 12. Deviation from the trend of the world real GDP in 1970-2000 (in percentage points), obtained with the use of HP Filter



Source: own calculation based on data from: IMF (2000a).

There are differences in indicating the periods of world economic recessions between the results of three approaches shown. To judge which method gives the best results, the most proper in the author's opinion is to use the simplest method and thus to choose the "simple observation" of the real GDP course. Thus, the following periods will be obtained: 1974-75, 1980-1982, and 1990-1992. There should be no doubts that the troughs of the world business cycle were in the years: 1975, 1982 and 1991. More serious 'growth recessions' could be observed in 1985-87 and in 1998. It gives the average duration of a world business cycle of about eight years (in the period 1975-1992).

8. World economic recessions and their historical regularities

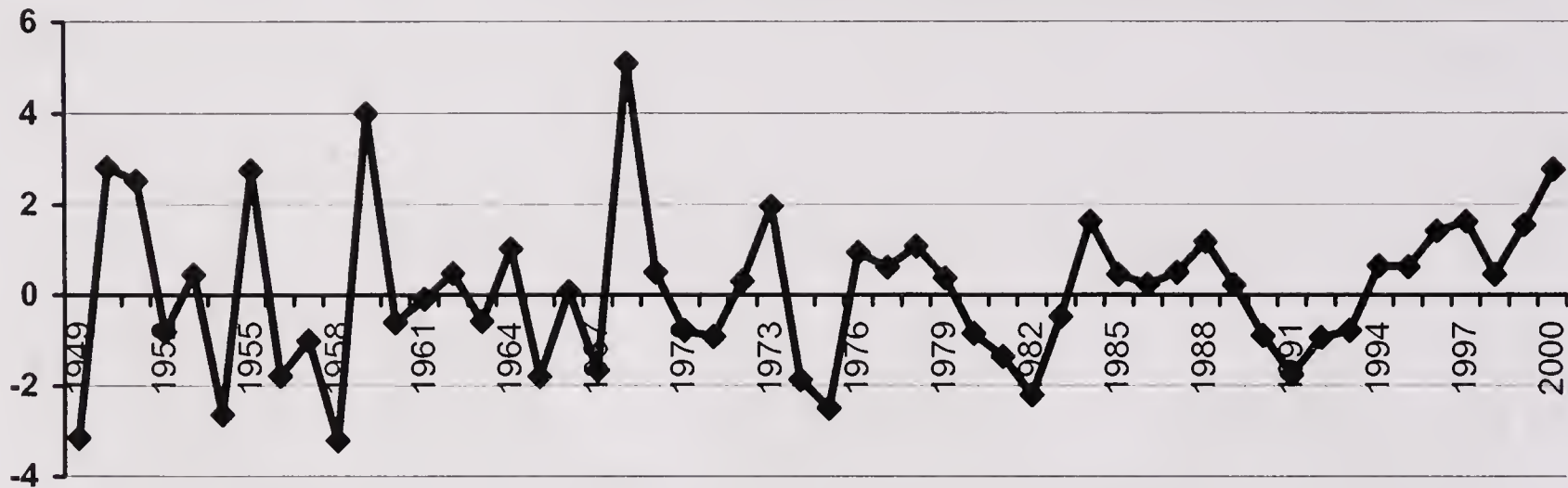
– summary

The whole period after World War II can be presented in one picture, adding to the reliable data from IMF for the last three decades, the author's estimations for the previous period.³²

³¹ Better results – from the historical analysis point of view – can be obtained assuming the -0.5% -line: 1974-75, 1980-82, 1990-93.

³² It should be noted that the author is conscious of the fact that it is not quite the right way from the methodological point of view, but it is justified because of the willingness to use the simple observation technique.

Figure 13. Deviation from the world real GDP trend in the period 1949-2000 (in percentage points), obtained with the use of HP Filter

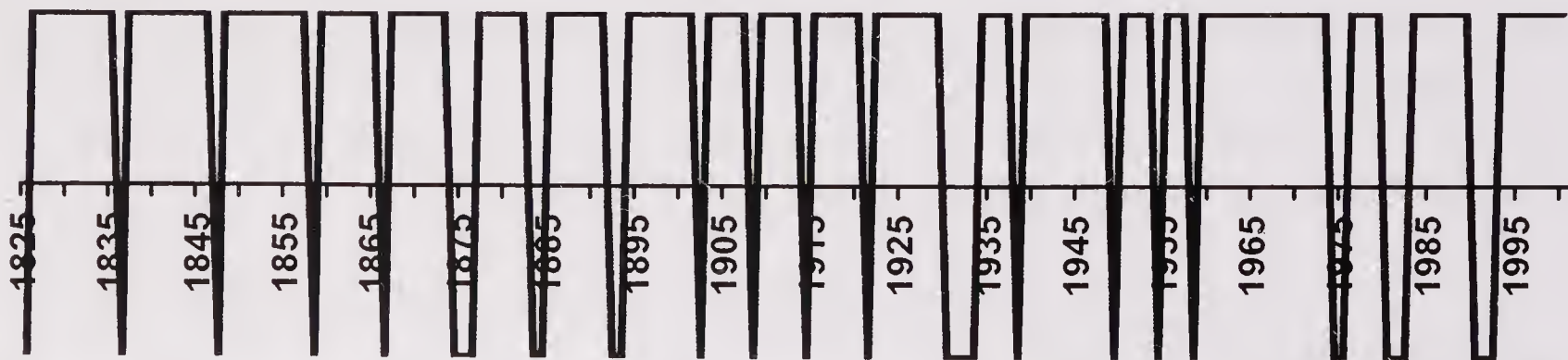


Source: figure 12 and own calculations based on the figure 7.

It can be concluded that the course of the world business cycle before the collapse of the Bretton Woods system was very volatile, especially compared to the last three decades.³³ It was not enough to identify the recessions properly based only on the deviations from the trend, because in the 1960s there were none, but the calculations gave different results. It should be noted that usually, after the huge growth, there was a fall the next year. It could suggest that the year 2000 could be the last year of such a huge growth (fig. 12) and the next one will show a significant slowdown of the world economy's development. All the dates of world economic recessions are shown in the next figure (fig. 14).

Thus, we can observe (fig. 14) that world economic recessions were quite often in the nineteenth and the twentieth century. Their regularity was often disturbed by various non-economic factors (like wars, state stabilisation policy etc.). According to the data and opinions presented, the world economic recessions started in 1825 and repeated with a regularity corresponding to the so-called Juglar cycle (which originally was 8.2 years long). In the period 1825-2000, they occurred 22 times (during 176 years). Thus, the average frequency of the world economic cycles was equal to eight years. It is worth drawing attention to the year 2000 and the conclusions derived, as well as to interpreting the regularity of the world economic recessions (fig. 14).

Figure 14. The dates of the world economic recessions during the period 1825-2000



Note: lower values indicate the years of a world economic recession; upper – remaining years.
Source: own counts.

³³ Amplitude of about 0.3 percentage points in the pre-Bretton Woods period and of 5.3 p.p. later.

9. Inevitability of the next world economic recession

The ‘stylised facts’ of the world business cycle presented above led the author – at the beginning of 1999, the year of high economic growth, perfect prospects and even some opinions about the end of a business cycle – to the main conclusion that the next world economic recession is unavoidable. However, this conclusion was contrary to the contemporary economic theory state, and opinions of many economists (e.g. Dow, 2000). As for me, the only open question was the length and deepness of the next recession.

The advance of instabilisation policy is nowadays better than in the nineteenth or at the beginning of the twentieth century. It shallows the recessions. In addition, due to the increased business cycles’ synchronisation of many countries, the recession at the beginning of the twenty-first century can be shorter than previously. Bearing in mind the enormous investment in technological stock markets, which was not stopped by economic politicians or central bankers, it was obvious, that it will end with a huge collapse. There were too many financial, speculative bubbles in the world during the last two centuries to forget it, although some economists had their doubts. Add to this the growth of oil prices, which contributed to the last three recessions, and we have all the basic reasons necessary to create the next world economic recession. The 11 September 2001 only contributed to this fact and deepened the ongoing recession.

The policy of OECD countries, as well as the synchronisation of monetary policies should have helped with overcoming the present recession, but not prevented them. The contemporary state of economic thought and knowledge was too small to achieve this.

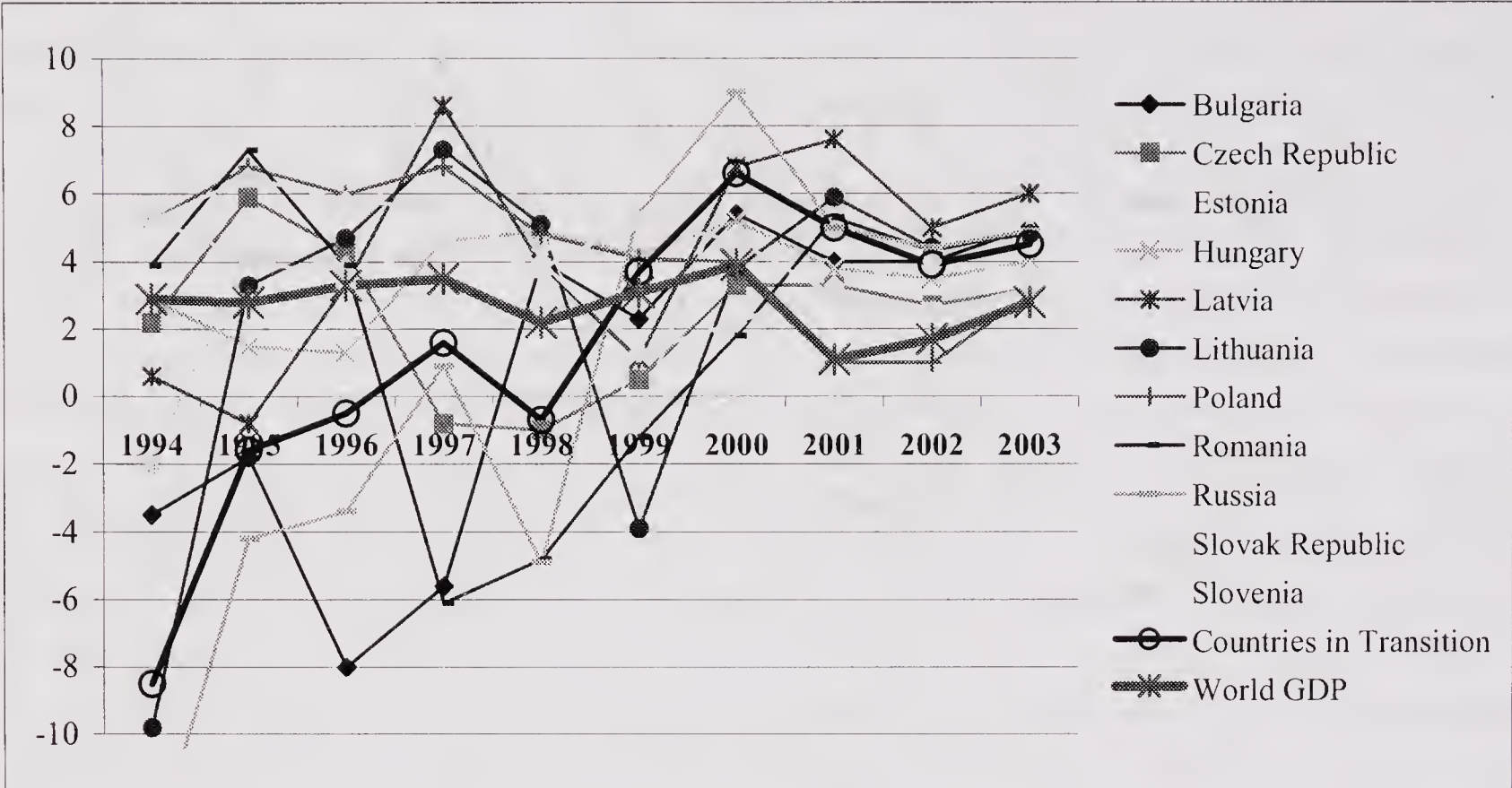
10. Contemporary world economic recession versus Central and East European Countries’ performance

World economic recessions do not necessarily significantly influence all countries. There are many factors which can change or even prevent such an influence. One of them is openness of a country, its economic relations with other countries. Despite the weakening of economic relations between Central and East European countries after the fall of Berlin Wall, some of them strengthened by the end of 1990s. They have built economic relations with similar partners, especially Germany or the European Union as a whole. It might lead to the synchronisation of their business cycles and synchronous occurrence of national recessions. Although it is easy to observe that the transition economies develop increasingly more in the same direction (fig. 15), the synchronisation of CEE countries business cycles can and should be quantitatively checked (Jagiełło, 2003; Piech, 2003; and later in this text).

However, using even quite simple calculations, based on the most up-to-date available data (IMF, 2002a), I have conducted some comparisons of the scale of chosen CEE countries’ synchronisation of development. The sample consists of the following, 11 countries: Bulgaria, the Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland, Romania, Russia, Slovakia and Slovenia. I have measured the dispersion (sum of modules of minimum and maximum values of data for a certain

year) of real GDP annual data (in constant prices) of above sample. I have also counted the standard deviation of the sample. Results are in the table 1.

Figure 15. Real GDP and forecasts of chosen transition economies and of world in 1994-2003



Notes: The data presented are mostly real GDP in constant prices, apart from world GDP: which is real GDP, market exchange rate weighted. Data for 2002 and 2003 are the forecasts. Source: IMF (2002a).

Table 1. Dispersion of real GDP of Central and East European countries

	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
Dispersion	18.8	11.5	14	15.9	10	9.3	10.8	8.6	6	9
Standard deviation	404.4	148.1	182.8	297.4	149.8	85.3	47.1	30.3	13.6	9.4

Source: own counts based on: IMF (2002a).

The calculations made confirmed the previous conclusions derived from data series' observations. The ECC countries develop usually increasingly more synchronously. Standard deviation coefficients especially confirm this trend.

11. Conclusions

If we observe that the pace of world economic growth decreased in 2001, the next world economic recession has begun, and if we notice that the countries in transition began to develop more similarly to the world economy (especially from 1997, at the beginning at least as the directions are concerned, and later, from 2001, more similarly), and if we see and calculate, that the transition countries develop more closely to each other, we can derive the following conclusion: the contemporary, world economic recession influenced significantly the CEE economies. Although the

influence was not huge, it really was, because it is not likely, that the transition economies could have slow down so much altogether only due to their own, internal problems, or transition countries' business cycles synchronisation without any external influence. The influence was not high in 2001 (see: Latvia, Lithuania, Romania and Slovakia – fig. 15), but more significant in 2002, with Poland, as the slowest developing country from the sample taken. Also, the forecasts (IMF, 2002a) for 2003 show that the pace of economic growth of CEE countries will slightly improve, accompanied by the world economic recovery, anticipated for this year.

References:

- Artis, M. J., Zhang, W. (1997), 'International Business Cycles and the ERM: Is there a European Business Cycle?', *International Journal of Finance and Economics*, no. 2(1), pp. 1-16.
- Berger, H., Voitek, U. (1997), 'How opportunistic are partisan German central bankers: Evidence on the Vaubel hypothesis', *European Journal of Political Economy*, Vol. 13, pp. 807-822.
- Christodoulakis, N., Dimelis, S. P., Kollintzas, T. (1995), 'Comparisons of Business Cycles in the EC: Idiosyncrasies and Regularities', *Economica*, no. 62, pp. 1-27.
- Dow, Ch. (2000), 'Major Recessions', Oxford University Press, Oxford.
- Fiorito, R., Kollintzas, T. (1994), 'Stylised Facts of Business Cycles in the G7 from Real Business Perspective', *European Economic Review*, no. 38(2), pp. 235-270.
- Friedman, M., Schwartz, A. J. (1963), *A Monetary History of the United States 1867-1960*, Princeton University Press, Princeton.
- Gärtner, M. (1999), 'The election cycle in the inflation bias: evidence from the G-7 countries', *European Journal of Political Economy*, Vol. 15, pp. 705-725.
- Hibbs, D. (1977), 'Political parties and macroeconomic policy', *The American Political Science Review*, no. 7, pp. 1467-1487.
- Hodrick, R., Prescott, E. (1980), 'Post-War U.S. Business Cycles: An Empirical Investigation', University of Warwick, *Discussion Paper* no. 451.
- IMF (2000a), *World Economic Outlook Database*, October.
- (2000b), *International Financial Statistics CD-ROM*, January.
- (2002), *World Economic Outlook: Recessions and Recoveries*, Washington, April.
- (2002a), *World Economic Outlook Database*, October.
- Jagiello, D. (2003), 'Economic Interrelations between Central and East European Countries' in: K. Piech (ed.) (2003), *Economic Policy and Growth of Central and East European Countries*, School of Slavonic and East European Studies, University College London, London, pp. 47-57.
- Kalecki, M. (1943), 'Political aspects of full employment', *Political Quarterly* no. 14, p. 322-31.
- Kindleberger, Ch. (1999), *Szaleństwo, panika, krach. Historia kryzysów finansowych*, WIG-Press, Warsaw.
- Kydland, F. E., Prescott, E. C. (1982), 'Time to Build and Aggregate Fluctuations', *Econometrica*, November.
- Mendelson, L. (1959), *Teoria i historia kryzysów i cykli ekonomicznych*, PWN, t. I, Warsaw.
- Morawski, W. (ed.) (1994), *Powszechna historia gospodarcza 1918-1991*, Wyd. Floks, Warsaw.

- NBER (2001), *Jones/Obstfeld Tables*, September, www.nber.org.
- Nordhaus, W. (1975), 'The political business cycle', *Review of Economic Studies*, no. 62, pp. 169-90.
- Piech, K. (2003), 'The Synchronisation of the Polish Business Cycle', in: K. Piech (ed.) (2003), *Economic Policy and Growth of Central and East European Countries*, School of Slavonic and East European Studies, University College London, London, pp. 167-176.
- Polszakiewicz, B. (1989), *Podstawowe prawidłowości cyklicznego rozwoju gospodarki kapitalistycznej*, PWN, Warsaw.
- Rusiński, W. (1973), *Zarys historii gospodarczej powszechnej. Czasy nowożytne i najnowsze (1500-1949)*, Książka i Wiedza, Warsaw.
- Schuknecht, L. (1999), 'Fiscal policy cycles and the exchange rate regime in developing countries', *European Journal of Political Economy*, Vol. 15, pp. 569-580.
- Sieg, G. (1997), 'A model of partisan central banks and opportunistic business cycles', *European Journal of Political Economy*, Vol. 13, pp. 503-516.
- Sokołow, D. (1964), *Deformacja światowego cyklu koniunkturalnego*, PWE, Warsaw.
- Vaubel, R. (1993), 'Eine Public-Choice Analyse der Deutschen Bundesbank und ihre Implikationen für die Europäische Währungsunion', in: D. Duwendag, J. Siebke (eds.), *Europa vor dem Eintritt in die Wirtschafts- und Währungsunion*, Duncker and Humbolt, Berlin, pp. 23-80.
- Vaubel, R. (1997), 'Reply to Berger and Voitek', *European Journal of Political Economy*, Vol. 13, pp. 823-827.
- Zarnowitz, V. (1992), 'Business Cycles: Theory, History, Indicators, and Forecasting', *Studies in Business Cycles*, No. 27, University of Chicago Press.

Economic Interrelations between Central and East European Countries

Dariusz Jagiełło

1. Aims and method

This article is aimed at verifying a hypothesis about the existence of economic relations between chosen Central and East European (CEE) countries in terms of the synchronisation of their business cycles, and to measure their strength (see also: Jagiełło *et al.*, 2002). The Czech Republic, Poland, Hungary and Slovakia have been chosen as the main subject of the study. The connections with Estonia, Lithuania, Latvia and Russia have also been investigated as explaining factors.

The economic transition of CEE countries is very similar. It may be confirmed by the COMECON system creating a common framework for economic development of countries and presenting a starting point for the systemic jump in the early 1990s. At the same time, the authorities of the individual countries similarly marked the direction of the reforms: towards a market economy, with a struggle to access into the European Union. Given similar starting points and the common target to be achieved, one might suppose that one way was adopted. However, ten years of experience denies this, proving that every country uses its own, unique economic policy mix most appropriate to their situation. This article tries to answer the question, to what extent these ways are convergent.

The correlation coefficient will be used to achieve this aim. The analysis will be supported by description, to investigate if the interdependencies are present or not. The study will be based on GDP – the category that is the most synthetic and easily measurable factor of the country's economic development and effectiveness of economic policy.

To ensure comparability and the best illustration of changes taking place in economies, the GDP figures used in the calculations are:

- expressed in constant prices in order to eliminate the disruptive influence of different inflation pace in individual countries,
- changed into the annual GDP growth rates in order to represent better dynamics of the processes and eliminate the impact of different GDP levels in absolute numbers.

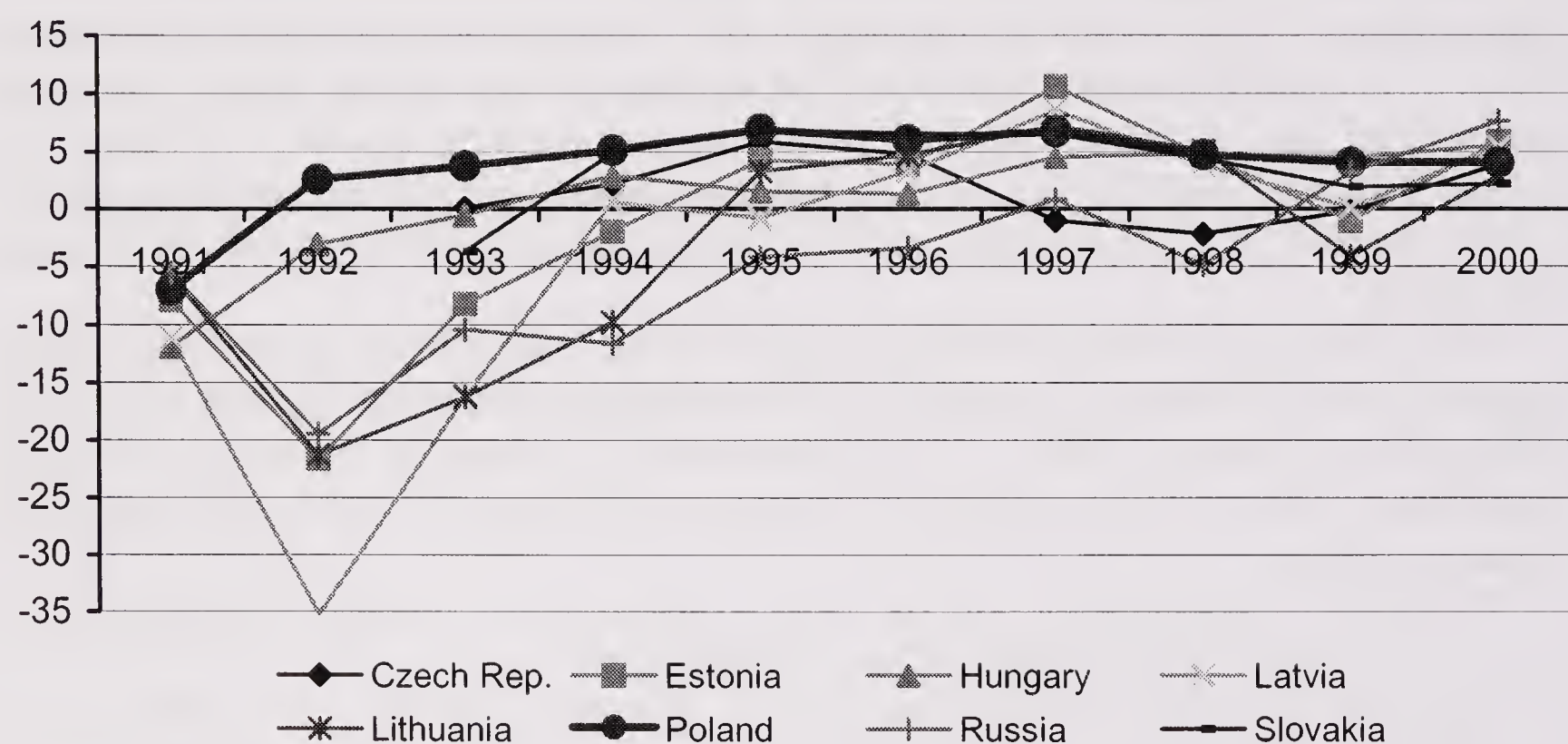
The analysis of the linear correlation coefficients between real GDP growth rates will be the research method. The “World Economic Outlook” database of IMF is a source of the figures. Data concerning the year 2000 is from the Czech Statistical Office, the Statistical Office of Estonia, the Hungarian Central Statistical Office, the Central Statistical Bureau of Latvia, the Lithuanian Department of Statistics and the Main Statistical Office (Poland). The positive correlation coefficient means growth in value of one feature in line with growth in average values of the other one. It is not

necessarily the most precise measure of the relation between the data due to assumption about its linear character.

The analysis of the strength of the correlation will be conducted in two phases. The first one is aimed to check if any significant linear relation between the economies exists. In order to achieve this the correlation coefficients between time series of GDP growth rates will be calculated for individual pairs of countries since 1991 (since 1993 for the Czech Republic and Slovakia) till 2000. The statistical significance with the confidence coefficient at a level of $\alpha = 0.05$ (with two degrees of freedom) is a background to assess the strength of a relation. Then the changes of the value of the coefficient in time will be studied, using rolling correlation coefficients in constant periods (5 years) moved by 1-year. A coefficient, calculated in such a way, is being assigned to the middle year of the period (e.g. the coefficient assigned to 1995 will concern the period 1993-1997).

Using the method, the statistical similarities between two time series could be confirmed. To prove existence of real interdependencies qualitative analysis is necessary. The preliminary idea about a degree of the convergence of the pace of economic development in the countries comes from figure 1.

Figure 1. The pace of economic development of the chosen countries



Source: IMF (2000a).

2. Interdependencies of the economic development of the Czech Republic and other CEE countries

According to table 1 the dynamics of the Czech economic development does not show any important convergence with the other countries concerned. The analysed relations are not significant in the whole period and only twice in the case of Hungary they are in 5-year subperiods (but negative). This suggests a conclusion that the Czech economy was developing independently from the others in the region.

Table 1. Correlation of the Czech GDP growth with other CEE countries

Country	1993-2000	1995	1996	1997	1998
Poland	0.36	0.39	0.47	0.55	-0.03
Slovakia	0.33	0.47	0.62	0.56	0.02
Lithuania	0.14	0.30	-0.20	0.01	-0.01
Estonia	0.09	0.09	-0.37	-0.16	-0.09
Russia	0.07	0.01	-0.18	-0.38	0.30
Latvia	0.04	0.11	-0.69	-0.52	-0.07
Hungary	-0.32	-0.28	-0.99	-0.98	-0.49

Note: correlation coefficients significant at 5% level are in bold.

Source: Own calculation on the base of IMF (2000a).

2.1. The case of the Czech Republic and Russia

Following the economic regime change and a fall of former Soviet markets, the Czech Republic started to establish close relations with the European Union countries and relations with Russia have been weakening. The short and insignificant weakening of the crown caused by the Russian financial crisis in 1998, without bigger influence on the Czech economy, confirms limited impact of the Russian economy on the development of the Czech Republic.

2.2. The case of the Czech Republic and the Baltic States

The above calculations show almost no relations between the countries. The volumes of their trade with the Czech Republic are low. Besides, the economic transition in the Baltic countries started two years later (in 1993) and the processes have had different courses. The economic relations with Russia were also much stronger while starting the reforms and they lasted longer in the Baltic countries than in the Czech Republic.

Only in the case of Latvia the correlation is definitely negative in two periods. We may find some explanation watching the foreign investment in both countries.

Table 2. Foreign investment in Latvia and in the Czech Republic (millions US\$)

	1996	1997	1998
Latvia: Direct investment	382	521	357
Latvia: Portfolio investment	24	-32	27
The Czech Republic: Direct investment	1435	1286	2554
The Czech Republic: Portfolio investment	771	1152	1146

Source: EP (2000, pp. 1211, 2226).

3. Interdependencies of the economic development of Slovakia and other CEE countries

The GDP of Slovakia shows certain convergence in pace of development with other countries. In individual subperiods there are statistically significant relations with the Baltic states and statistically significant correlation between the GDP dynamics of Slovakia and Poland. It will be explained later in this text.

Table 3. Correlation of real GDP growth rates of Slovakia and other CEE countries

Country	1993-2000	1995	1996	1997	1998
The Czech Republic	0.33	0.47	0.62	0.56	0.02
Estonia	0.76	0.85	0.47	0.71	0.60
Hungary	0.30	0.70	-0.57	-0.62	-0.63
Latvia	0.79	0.92	0.07	0.33	0.53
Lithuania	0.77	0.86	0.45	0.82	0.78
Poland	0.84	0.91	0.95	0.94	0.95
Russia	0.14	0.62	0.60	-0.56	-0.66

Note and source: see table 1.

3.1. The case of Slovakia and Russia

In the period studied this statistical relation does not exist. It is surprising as Slovakia has been trying to tighten the relations with Russia. Although, for a long time, Russia has been Slovakia’s second most important trading partner, Slovakia’s share in Russia’s trade balance has been marginal. In addition, Germany overtook Russia’s position in Slovak trade. Concerning Slovakia’s intention to access the European Union, the reforms inevitable to improve market mechanisms and the mighty troubles of the Russian economy, the two countries are likely to develop independently, which is confirmed by calculated correlation coefficient changes.

3.2. The case of Slovakia and the Czech Republic

The correlation of these two countries is small, which is the more surprising that only a few years passed since they created a federated country. This may be caused by different economic heritage after the split of Czechoslovakia into two separate countries (especially inefficient heavy industry in Slovakia). Besides, Slovakia continuously aimed to weaken its relations with the Czechs, stating that they are too asymmetric (with advantage for the Czech Republic), and deep dependence on one trading partner can be harmful in the long run (EP, 1997, p. 706). Besides, while the Czech Republic directed its trade mainly to Germany, Slovakia struggled to boost export to Russia in order to offset a huge value of import (mainly petrol). The different ways and the different pace of adjustments to market economy (especially much faster privatisation in the Czech Republic) seem to be the main factor of lack of convergence.

Table 4. Inflow of foreign investment to Slovakia and to the Czech Republic (millions USD)

	1993	1994	1996	1997	1998
The Czech Republic	654	878	1435	1268	2554
Slovakia	199	203	-38	-95	-134

Source: EP (1997), p. 307, 713; EP (2000), p. 1211, 3243.

The fall in the correlation coefficient in the last few years to almost zero is, to a certain extent, a result of different times of crises in both countries. Although for the moment the interdependencies have practically disappeared they may be expected to increase in the future.

3.3. The case of Slovakia and Poland

The results of the studies show the existence of linear correlation of Polish and Slovak GDP changes. From the economic point of view, the countries do not show many similarities, except of being in transition. They are not mutually significant trading partners. Only some similarities may be noticed in the changes of the volume of their foreign trade. The foreign investment structure does not provide an explanation of the situation either. The economic policies of the countries are also very different (although their effects are similar).

There is a possibility that due to the character of the correlation coefficient and very short period it may be only a statistical coincidence. The existence of non-economic factors causing a similar business cycle course is also possible. It should be mentioned that due to political factors, the calls to limit the social costs of conducted reforms were popular in both countries. In economic policy they were reflected by the struggle to curb unemployment, stop decrease of disposable incomes and boost growth. In certain periods, in both countries the GDP growth was a priority of economic policy as a response to claims, especially by labour unions. It caused macroeconomic imbalances and finally led to a change of ruling parties and paying more attention to balance the economies, which caused growth to slow down.

4. Interdependencies of the economic development of Poland and other CEE countries

The calculations conducted show the statistically significant correlation of the Polish GDP growth with Hungary and Slovakia, weak relations with the Czech Republic, the Baltic states and independent development of Russia.

Table 5. Correlation of the Polish GDP growth with other CEE countries

	1991-2000	1993	1994	1995	1996	1997	1998
Hungary	0.87	0.97	0.81	0.65	-0.38	-0.55	-0.50
Slovakia	0.84	n.a.	n.a.	0.91	0.95	0.94	0.95
Estonia	0.50	0.33	0.96	0.93	0.56	0.71	0.68
Latvia	0.41	0.21	0.90	0.83	0.13	0.28	0.64

The Czech Republic	0.36	n.a.	n.a.	0.39	0.47	0.55	-0.03
Lithuania	0.34	0.05	0.96	0.94	0.44	0.68	0.72
Russia	0.16	-0.17	0.91	0.81	0.63	-0.32	-0.45

Note and source: see table 1.

4.1. The case of Poland and Hungary

The strong relation between Poland and Hungary is due to convergent directions in their economic policies. In the short run, however, it shows weakening dynamics, reaching an even notably negative level.

In the early years of the transition-shock recovery, the trends of the growth dynamics are almost perfectly convergent. The Hungarian growth started, however, from the lower dynamics in the beginning of the period. The further changes result in contrary fluctuations in both countries around similar medium-term trends (the fall from 7% to 4% in Poland versus the growth from 1.5% to over 5% in Hungary between 1995 and 2000). The speeding-up in Hungary is connected with the successful Bokros plan, when not satisfying disinflation forced the introduction of more strict monetary policy and slower growth dynamics.

The foreign trade also supported convergence both in mutual terms as well as its similar geographical structure.

Table 6. Poland’s trading partners (millions USD)

	1991	1992	1993	1994	1995	1996	1997	1998	1999
The Czech Republic	n.a.	n.a.	693	958	1590	1997	2231	2485	2513
Estonia	n.a.	n.a.	13	23	33	79	80	88	110
Hungary	261	309	340	405	619	736	956	1063	1163
Latvia	n.a.	29	44	53	614	98	135	210	231
Lithuania	n.a.	91	136	192	256	340	450	568	636
Russia	n.a.	2016	1916	2388	3234	4180	4840	3969	3386
Slovakia	n.a.	n.a.	n.a.	n.a.	660	713	833	927	924

Source: Own calculations on the base of IMF (1997), IMF (2000b).

4.2. The case of Poland and Slovakia

The higher values of the correlation may be surprising. After 1993 market reforms in Slovakia were sluggish. Although the strong position of Germany and Russia in the current accounts balance and about 5% Slovakia’s share in Poland’s export may be somewhat helpful. It is nevertheless difficult to find convincing justification for these values.

The statistical features of the coefficient may, to a certain extent, influence its overvaluation in a shortened period. The political changes in both countries help to explain these strong similarities. Despite different economic philosophies, Mečiar’s government struggled to boost economic growth regardless of general disequilibrium. The left-wing, ruling in Poland in 1993-97, has seen economic growth as a means to reduce the social costs of the tough transition process. The 1998 changes at the arena

resulted in tightening economic policy in Poland and a return to the determined market reforms in Slovakia.

The Russian crisis of 1998 has also contributed to slowdowns in both economies. Concerning the above, lowering of the correlation may be expected.

4.3. The case of Poland and the Baltic states

All the economies show limited positive correlation with Poland (insignificant in statistical terms). The dynamic analysis shows certain similarities but is strongly influenced by time differentiation of the transition reforms. The latter, beginning in the Baltic states, is reflected in low values of the coefficient in the early years. The subsequent period of simultaneous recovery caused the correlation to jump to a very high level till the pace of Polish growth had stabilised, resulting in the coefficient to fall again. In addition, while the Russian crisis contributed to a stabilisation of the dynamics of the Polish GDP on the lower level, the Baltic states' economies faced a rigid slump (with recessions in Lithuania and Estonia in 1999) offset by later recovery.

The foreign trade links illustrate the image with a 20% share of Russia in the case of the Baltic trio (especially Lithuania which was strongly dependent on Russian fuels) and, in comparison to Poland, was significantly lower than that of Germany and higher than that of the Scandinavian countries. The only significant direct link is Poland being a source of 5% of Lithuanian import.

4.4. The case of Poland and the Czech Republic

The weak correlation in this case may be surprising. The contribution of the shortened period should be mentioned here, but with the results opposite to Slovakia's case. By not concerning the "shock" period the correlation is significantly undervalued.

Except for that, due to a different economic policy, even in this shortened period, its different results are visible. The very restrictive monetary policy of the Vaclav Klaus government and deferring the micro-level reforms influenced a slower pace of post-shock recovery and a further currency crisis and recession. The significant GDP growth was observed already in 2000, after the socialdemocrats had come to power.

The structure of foreign trade shows many similarities (but with the more important role of the "eastern markets" in the Polish balance). Moreover, Poland buys over 5% of the Czech export.

4.5. The case of Poland and Russia

The coefficients show almost no correlation between Poland and Russia, except for a short period of decrease in Russia's GDP fall.

The likely reason for the situation is in fact the lack of effective market reforms and consistent government economic policy in Russia, leaving the power over the economy in the hands of "oligarchs". The strong differentiating factor is also the totally opposite effect of world fuel prices for both economies. When the prices increase it influences positively the Russian economy, but negatively the Polish.

5. Interdependencies of the economic development of Hungary and other CEE countries

From the coefficients below, only Poland fulfils the criterion of statistical significance. Foreign trade may be one of the explanations. Except for Russia, European Union countries are Hungary’s strategic partners. Only the major role of Germany may be a common element.

Table 7. Correlation of the Hungarian GDP growth with other CEE countries

	1991-2000	1993	1994	1995	1996	1997	1998
Poland	0.87	0.97	0.81	0.65	-0.38	-0.55	-0.50
Estonia	0.63	0.39	0.88	0.78	0.41	0.10	0.16
Latvia	0.61	0.33	0.95	0.88	0.66	0.42	0.22
Lithuania	0.46	0.04	0.70	0.59	0.20	-0.12	-0.15
Russia	0.46	-0.16	0.70	0.54	0.21	0.48	0.56
Slovakia	0.30	n.a.	n.a.	0.70	-0.57	-0.62	-0.63
The Czech Republic	-0.32	n.a.	n.a.	-0.28	-0.99	-0.98	-0.49

Note and source: see table 1.

The relatively lower value of the coefficients may be significantly influenced by the gradual strategy of Hungarian transition, contrary to predominantly “shock” therapies in the other countries.

5.1. The case of Hungary and the Baltic states

A clear influence of the later start of the reforms may be observed in this case: lowering the values of the correlation coefficients at the beginning of the studied period and after stabilisation of the pace of Hungarian development. The severity suffered by the Baltic states from the Russian crisis has driven the coefficient values to the level close to zero in the short-term prospect.

Some positive influence may be due to the significant position of Russia as a significant trading partner of these countries.

5.2. The case of Hungary and Russia

Although the coefficient suggests some limited correlation, no analysis confirms it, despite the significant (but diminishing) role Russia plays in Hungary’s foreign trade. The opposite reactions for the fuel prices’ changes are not favourable for the strong correlation. Actually, no significant reaction to the Russian crisis seems to confirm lack of interdependencies in this case.

5.3. The case of Hungary and Slovakia

Despite geographical proximity, the analysis shows almost no correlation between these countries. After significant similarity in the first period, the relation changes its

direction dramatically, mainly due to political change in Slovakia and the subsequent slowdown. The Russian collapse has also influenced Slovakia significantly.

5.4. The case of Hungary and the Czech Republic

The value of the coefficient is low and surprisingly negative. The developments in the analysed period seem not to be representative for the long-term nature of the relation. Despite comparable levels in the changes taking place, their short-term direction is opposite: while growth is stable in Hungary, the Czech crisis caused fluctuations in the pace of the GDP dynamics. From the point of view of problem analysis, concerning exclusion of the similar 1990-92 period, the above value of the coefficient seems to be rather incidental and not reflect the long-term background. Probably low risk is associated with a statement that the factor will reach not only a positive, but a significantly high value soon.

6. Conclusions

The above analyses show different values of the similarities in the development paces of the countries, which may signal the existence of ties and interdependencies among them. Statistical relations have been proved between Poland and Hungary and between Poland and Slovakia.¹

It should be noted that the long-run relations have not necessarily been revealed in the post-transition reality. The weaker strength of the correlation results from varied economic policies applied in every country. This proves the major role of the political factor in analysing the problems of the transition countries' economic growth.

The above differences may cause doubts if the concerned countries constitute a coherent economic region. The transition realities create a common framework, but the national policies show great differentiation. To address this question one needs to wait till more long-term tendencies can be identified and analysed. A conclusion can be drawn that the pace of economic development in the region's countries is strongly determined by national policies than by external factors during the transition period. In line with strengthening internal stability and opening the economies, creation of strong international relations will gain in importance.

The doubt also arises if creation of the CEFTA has supported the strengthening of its members' mutual relations. The problem is also worth mentioning from the point of view of the future accession to the EU and the EMU. The above method may be used as an alternative way of quantifying the Maastricht convergence criteria.

The similarities are also vital in the prospect of the investors' reception of our countries. If they share the point of view described above, it may stimulate by spill-over effects, the streams of investments, which is a particular danger in the case of crisis transmission mechanisms. The above method may also help to explain why the Czech turmoil in 1997-98 has not spread to the other countries and why the Russian

¹ And also between Poland and United Kingdom and the US (see: Piech, 2003). Moreover, as Piech (2001) noticed, from the sample of 181 countries regarding the most synchronised economy with the US, Poland was placed at a very high position in the period 1970-2000.

crisis of 1998 has had only limited impact on the region's economies. The answer is simple: very weak interdependence of growth of CEE countries. From the conducted research another thing can also be noticed. If CEE countries do not create a common market in the economic interrelations sense (although Visegrad countries to some extent – do), there should be initiatives undertaken in order to improve this situation (e.g. by supporting the International Visegrad Fund). It is also an argument in favour of speeding up the process of integration with the EU. It is also important from the point of view of explanation of calculations: some synchronisation between certain countries could be explained by the close relations of CEE countries with the EU (and the US).

References:

- EP (2000), *Europa World Year Book*, Europa Publications, London.
- (1997) *The Eastern Europe and the Commonwealth of Independent States 1997*, Europa Publications, London.
- IMF (1997), *Direction of Trade Statistics Yearbook 1997*, Washington.
- (2000a), *World Economic Outlook Database*, September.
- (2000b), *Direction of Trade Statistics Yearbook 2000*, Washington.
- Piech, K. (2001), *Światowe recesje i polityka antykryzysowa a gospodarka Polski*, Warsaw School of Economics, Warsaw (Ph.D. dissertation).
- Piech, K. (2003), 'The Synchronisation of the Polish Business Cycle', in: K. Piech (ed.) (2003), *Economic Policy and Growth of Central and East European Countries*, School of Slavonic and East European Studies, University College London, London, pp. 167-176.

Convergence in Employment Structures: Transition Countries versus the EU: Reforms, Income Levels or Specialisation Patterns?

Tomasz Mickiewicz

This paper investigates the structural characteristics of employment in the transition countries, and possible link with the reform process. It argues that the identification of 'old' and 'new' sectors may be based on convergence benchmark, with the employment structures in Central and Eastern Europe (CEE) compared with those present in the most developed European Union (EU) economies. The paper demonstrates a link between structural adjustment and reforms. It discusses also alternative measures of structural change and patterns of structural evolutions.

Introduction

The aim of this paper is to investigate the link between structures of employment and the reform process in transition countries. The paper argues that the identification of 'old' and 'new' sectors may be based on convergence measures, with the employment structures in CEE compared with those present in the most developed EU economies. The paper provides an indication that there is a link between structural adjustment and reforms. It also discusses alternative measures of structural change and patterns of structural evolutions.

First, we discuss employment data on the most aggregate level (agriculture, industry, services). Patterns of structural change in post-communist countries are presented and compared with the standard relationship between GDP per capita levels and structures. Next comes discussion of structural changes in transition countries on the more disaggregate level (ISIC-3). The subsequent section introduces alternative measures of structural change and analyses their usefulness. In this context, the link between unemployment and structural change is discussed. Finally, the last section demonstrates the relationship between reforms and restructuring.

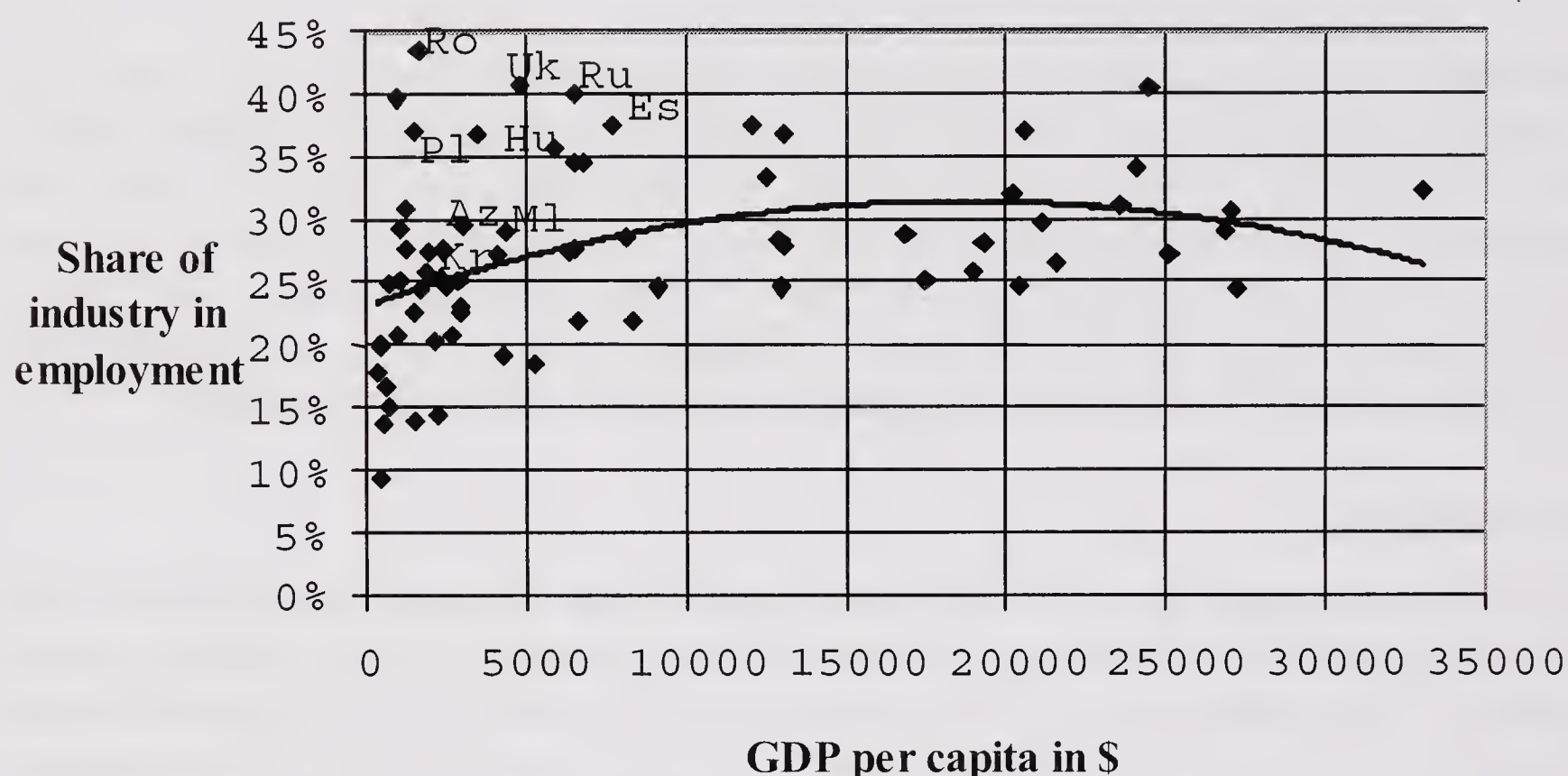
1. GDP per capita and structures of production

The typical development path of economic structures corresponds to the well documented empirical relationship between the level of per capita GDP and the sectoral patterns of production and employment. Low income countries' economies are almost entirely agricultural. Economic development brings in an increased share of manufacturing and services. In the later phase, the share of industry stabilises, then starts to fall, while the service sector increases further (Rowthorn and Wells, 1987; Dohrn and Heilemann, 1993, 1996; EBRD 1997, 1999).

The communist countries did not follow this pattern. The share of industry was much higher than for comparator countries with a similar level of income per capita.¹

This is illustrated by the figure below:²

Figure 1. GDP per capita and share of industry, 1990, 71 countries



Source: UN (1997), and WIIW database.

The relationship between income per capita and size of the industrial sector is not perfect. The more exact fit could result from (i) controlling for the phase of the business cycle (as, say, measured by some unemployment indicators) and (ii) controlling for export specialisation (Rowthorn and Wells, 1987). In addition, Dohrn and Heilemann (1996) introduce some more elements including (iii) natural resource endowment and (iv) investment. They also (v) exclude some groups of countries, all low income in particular, where dispersion is large. This latter operation is problematic, and seems not to have a specific grounding in theory. On the other hand, natural resource endowment is correlated with the share of primary sector in exports (i.e. *ii* and *iv* are collinear).

What is the economic significance of this general long-term relationship between GDP levels and structures? Rowthorn and Wells (1987) answer the question presenting a simple (but not trivial) dynamic model, where structural change is driven by two factors:

- the improvement in productivity, with a different rate of productivity change for the three sectors (low for services and high for both agriculture and manufacturing), and

¹ The difference between the Soviet bloc and the rest of world would be even more striking with non-employment added as a fourth sector, as employment was exceptionally high in the socialist countries.

² When the socialist countries are excluded from the sample, coefficient of determination increases from 0.15 to 0.29.

- differences in income elasticities of demand, with the demand for food being income-inelastic.

Combined together, those two driving forces are sufficient to result in the dynamic structural evolutions corresponding to Figure 1.

If this model is correct, any econometric exercise, which tries to explain sectoral composition of employment (or output) by GDP per capita should take into account that the real model has more than one dimension, with the different pace of productivity change across sectors being the major driving force. For instance, it is not the case that some countries are poor due to excessive share of employment in agriculture, but rather that this share is excessive due to low productivity.

More generally:

$$(1) \quad V = f(E_1, E_2, \dots, E_n),$$

where V is value-added, E corresponds to share of employment in a sector of economic activity and function f may be either additive, or not. In the latter case, there are complementarities between sectors. For instance, efficiency of manufacturing is enhanced by the existence of a developed financial sector, other business-oriented services, transport services and educational system.

Income per capita corresponds to average productivity level, but it also affects the structure of demand. In particular, income elasticity for some services is high. As they are nontradables, their production is driven by domestic demand, which is increasing more than proportionally with real incomes.

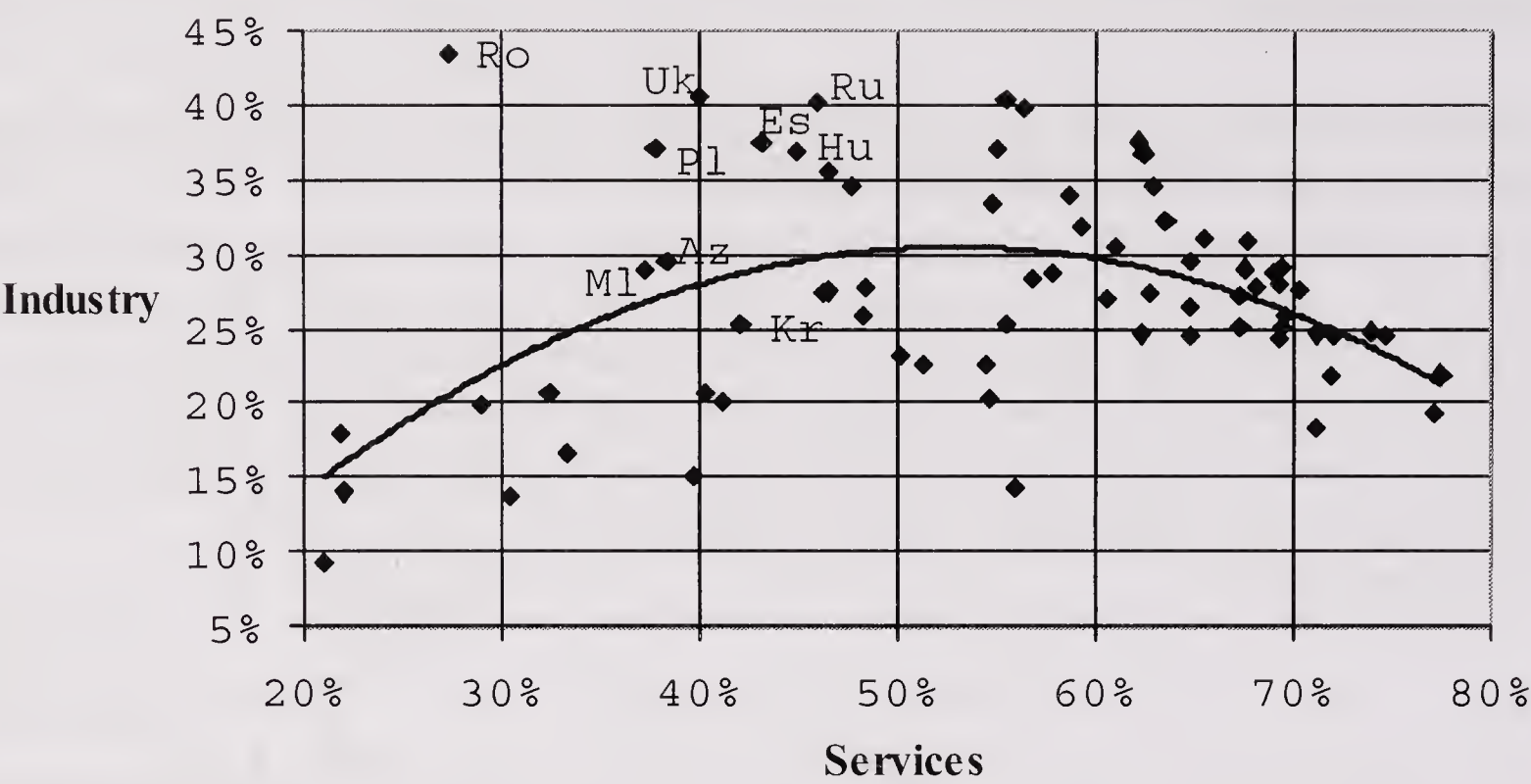
Thus, the link between structures and GDP per capita results from a mixture of demand and supply factors. Part of the process is well explained by standard factors affecting economic growth: capital accumulation, human capital, infrastructure, legal and macroeconomic stability result in increased productivity in agriculture, and next in industry. The resulting transfer of employment to services is a mixture of a shift towards more efficient production structures (including increased financial sector and business services, transport networks and educational systems) and a response to a shifting pattern of demand.

2. Transition: 'horizontal' versus 'vertical' convergence

Figure 1 confirms the well-known fact: socialist economies were characterised by exceptionally high shares of industry. Romania, Russia and Ukraine are clear outliers, followed by Poland, Hungary and Estonia and three former Soviet Union republics, slightly above the trend line (Azerbaijan, Moldova, Kirgistan). The large share of industry is an explicit effect of the imposed pattern of development under socialism. Yet, there were some additional system-specific factors: the workforce's high level of literacy and education, extensive urbanisation, and the predominance of large scale organisation in agriculture (resulting from collectivisation in all the transition countries except Poland) (EBRD, 1997, p. 64).

Before focusing the discussion on post-communist countries, it is convenient to map figure 1 into purely structural space (figure 2 below).

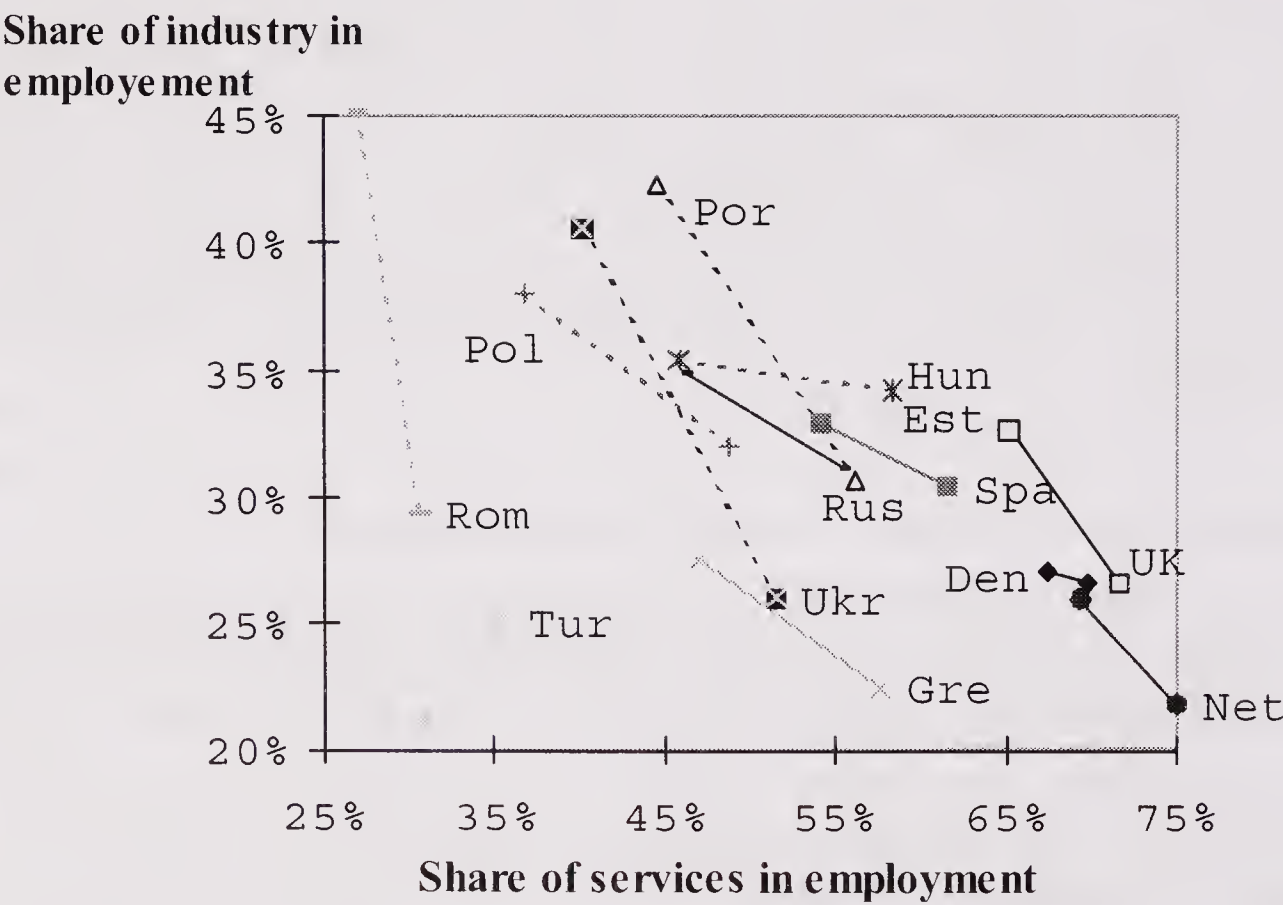
Figure 2. Employment structures, 1990, 71 countries



Note: Agriculture (counts 100% minus industry and services) corresponds to either ISIC2, division 1 or ISIC3, categories A and B; industry means either ISIC2, divisions 2-5, or ISIC3, categories C-F, while services relate to remaining sections

The fact that the link becomes stronger, as compared with Figure 1 is not particularly surprising, as the shares of both sectors (plus agriculture) must add to one, so they are correlated by construction. Again, the post-socialist group is a clear outlier.³

Figure 3. Structural changes, 1989-1998



Note: Greece, Portugal - 1989/1997, Russia, Ukraine: 1990/1998.
Source: ILO (1998, 1999), WIIW database.

³ Similarly to Figure 2, when the socialist countries are excluded, coefficient of determination for the trendline increases from 0.24 to 0.42.

What is the direction of change in the region? Figure 3 uses the same aggregate structural framework to present basic data on structural evolutions in Central and Eastern Europe, with several other countries presented for comparison.

Everywhere, the share of services increased; therefore the direction of change is always from left to right, with the first point representing 1989 and the second point 1998. As the distances on both axes are approximately the same (by construction), the measure of slope matters. If the slope is positive, then both the share of industry and of services increased (Turkey). The slope of the vector between 0 and -45° corresponds to the faster growth in services than decrease in industry, which implies a decrease in agriculture. On the contrary, a steep slope (i.e. $\leq -45^\circ$) would represent an increased share of agriculture, which corresponds to rapid deindustrialisation not matched by growth in services. That relates to Romania, Ukraine and Russia. In the latter economy, the share of agriculture increased from 13.2% in 1990 to 15.4% in 1994 and next started to fall, back to 13.0% in 1998 (WIIW database).⁴

The length of the vector may be interpreted as a measure of speed of restructuring, as it is given by:

$$(2) \quad d(i,s) = (|i_{97} - i_{89}|^2 + |s_{97} - s_{89}|^2)^{1/2}$$

where i corresponds to the share of industry and s to the share of services.

Poland, Hungary and Estonia started with fairly similar structures of employment (relatively high shares in industry) and they all seem to be converging towards the EU countries represented on the graph. Noticeably, the three transition countries are very close to the two South European ‘cohesion’ countries, Portugal and Spain. The pace of restructuring (as measured directly by the length of the vector) was faster in Central European countries than in the two southern EU economies over the same time period. As a matter of fact, in 1998, both Estonia and Hungary already had a service sector larger than that in Portugal and close to the same size as that in Spain. On the other hand, the process of change in Central Europe did not consist of rapid deindustrialisation, as represented by the relatively flat slopes of the vectors.

Both central and southern European economies appear to be following a course similar to the earlier development path of three north European economies: the Netherlands, Denmark and the UK. Yet, between 1989 and 1998, the pace of change in those three was slow (again, as measured by the length of the vectors), with almost no change in Denmark, mild adjustment in the Netherlands and relatively faster deindustrialisation in the UK, resulting in convergence towards the other two countries. Greece seems to be on a different path, parallel to all the above but characterised by a much lower share of industry.

For the central and east European economies, adjustment towards the countries with a similar level of per capita GDP (i.e. ‘vertical convergence’) would mean a loss of the large share of industrial employment. Such a scenario could materialise for two reasons:

⁴ The flows in and out of labour force (changes in the activity rates) are left aside. That is an interesting topic for future work. Here, only the composition of the labour force is analysed. Therefore, restructuring means shedding labour in one sector, taking up in another or both. This will be elaborated further in the next sections of this paper.

1. existence of oversized, distorted industrial structures, characterised by negative value-added and difficult to restructure⁵,
2. inadequate reforms that did not result in both incentives and resources for restructuring.

The first factor affected the size of industrial decline in the initial period of transition. The second (reforms) was crucial for employment creation in new sectors. This view is supported by existing econometric studies on economic growth in the region (see Berg *et al.*, 1999).

The scenario of rapid deindustrialisation was followed by Ukraine and Romania, and to a greater or lesser extent, Russia. The alternative path is more typical for those countries, where liberalisation programmes were more effectively implemented ('horizontal convergence'). After the initial period of transformational recession and employment shedding, the employment levels in industry stabilised (see data on 1994-1998, below). As a result, the process of deindustrialisation has been much slower and it was brought about mostly by the development of the service sector, not by a 'backward' flow of employment from industry to agriculture. In general, efficient (horizontal) transition paths do not appear to be correlated with the highest levels of job shedding in industry.

3. Transition countries: structural change on disaggregate level

More detailed evidence on structures is provided by Tables 1 and 2, which compare employment between 1994 and 1998.

Table 1 presents 1994 employment data for the five Central European countries, which were in the first group to start accession talks with the EU, plus Slovakia and Romania, which joined EU negotiations more recently⁶. The post-recession development may be assessed by comparison with the more recent 1998 data on ten accession countries plus Croatia.

While the early transition period of 1989-1994 was characterised by an intensive process of labour shedding, the situation has changed more recently. In particular, comparing categories D in both tables, one can see that employment in manufacturing has stabilised, with a rate of change varying between +3% for Poland and Hungary,

⁵ In 1992, 51.75% of USSR employment was in value-subtracting branches (world prices). The figure for Bulgaria was 33.81%. Hungary and Czechoslovakia had correspondingly 16.83% and 16.84%. In Poland, which started the major reform programme earlier (in January 1990), only 0.47% of employment was located in value-subtracting branches already in 1992 (Hughes and Hare, 1992; ILO, 1996). Moreover, Hughes and Hare found that 'most industries in Poland had DRCs which are compressed into a small band around the average, whereas in the USSR the distribution is much more dispersed' (Ibid., p. 89). According to this, the potential for restructuring was more evenly distributed across Polish industries, while in USSR, there were some sectors, with very high potential cost of restructuring (machinery, metallurgy), thus almost doomed to collapse.

⁶ Following decisions of the Luxembourg Summit (1997), the EU enlargement process was launched on March 30, 1998 and negotiations started with the Czech Republic, Estonia, Hungary, Poland and Slovenia ('First Wave' candidates). The Helsinki Summit (December 1999) abolished First/Second Wave division. Bulgaria, Latvia, Lithuania, Romania and Slovakia were invited to join negotiations. The enlargement process relates also to three countries outside the former Soviet bloc: Malta, Cyprus and Turkey.

+2% for Slovakia, -1% for Slovenia, -2% for Estonia. Only the Czech Republic⁷ (-7%) and Romania (-13%) experienced significant job losses in manufacturing.

Table 1. Employment in thousands, 1994, 'First Wave' candidates, Slovakia, Romania

Category	ISIC3	Cz. R.	Hungary	Poland	Romania	Slovakia	Slovenia	Eston
Agriculture	A+B	346	328	3514	4261	214	98	101
Mining	C	98	39	440	261	34	9	11
Manufact.	D	1476	889	3106	2687	564	293	143
Utilities	E	100	108	232	185	48	9	19
Construct.	F	456	201	904	452	187	48	50
Trade, rep.	G	628	467	1703	662	204	97	88
Hotels,rest.	H	153	111	163	147	54	30	19
Transp,com	I	382	314	794	552	163	51	58
Finance	J	85	73	308	77	25	18	8
Real Estate,	K	247	126	246	181	83	30	30
Administrat	L	282	320	680	451	126	37	36
Education	M	324	339	997	461	178	46	48
Health, soc.	N	295	239	932	348	141	52	47
Other serv.	O	168	188	610	188	77	28	27
Priv.househ	P	1	1	8		1	1	6
Int.Organis.	Q	1	8			1		
Not classif.	X	3	1	21		3		
TOTAL		5045	3751	14658	10914	2103	847	692

Source: International Labour Office, 1998, Yearbook of Labour Statistics 1998, Geneva.

Table 2. Employment in thousands, 1998, accession countries and Croatia

ISIC3	Cz.R.	Hun	Pol	Rom	Slovak	Sloven	Eston	Lat	Lith	Bulg	Croat
A+B	285	278.8	2946	4342.171	164.7	109	61.1	209.3	295.4	796.8	33.2
C	89	25.7	381	201.913	31.1	8	7.3	0.5		56.2	8.2
D	1373	912.1	3205	2313.693	574.3	290	140.7	191.9	312.8	706.5	273.8
E	92	96.5	265	234.974	50.4	9	17.2	24.4	41.2	58.2	26.9
F	480	230.0	1071	433.519	197.9	51	48.0	54.9	106.0	137.0	71.7
G	660	472.2	2117	925.894	266.5	111	89.8	141.0	234.0	326.0	156
H	165	121.6	219	142.112	63.1	38	15.6	15.5	25.9	75.8	42.2
I	383	301.9	958	529.360	168.2	51	59.5	86.0	106.4	223.9	83.8
J	97	81.8	354	81.764	36.8	18	7.1	9.8	19.1	40.8	28.3
K	253	163.0	464	153.923	82.0	47	37.0	29.5	46.7	96.7	46.3
L	321	294.3	779	504.564	149.1	41	36.8	59.8	77.2	80.1	118.6
M	307	305.5	972	428.123	164.1	60	57.4	90.6	149.3	233.0	78.8
N	272	237.8	1056	335.391	143.6	41	35.1	51.8	107.0	170.0	75.7
O	160	171.8	558	217.513	72.0	29	29.8	48.0	67.1	105.0	27.7
P	1	1.5	8		2.7	1		1.9			
Q	2	3.0	1		0.4						
X	2	0.2				4					
TOTAL	4942	3697.7	15354	10845	2167	908	642	1015	1588	3106	1071

Note: the Czech Republic and Latvia: 1997.

Source: ILO (1999), WIIW database.

⁷ Figure for 1994-1997 period, which does not take into account the recent employment/ unemployment shock in the Czech Republic. Thus, comparative difference would, in fact, be even higher.

However, the interpretation for each of those two countries is different. The Czech Republic appears to be on a convergence path (see evidence below). Yet in the past, its policy choice was to delay employment reductions in manufacturing, mainly by delaying bankruptcies (see: Hoshi *et al.*, 1998). This is confirmed by the fact that of the six Central European countries analysed by Jackman and Pauna (1997), the Czech Republic was characterised by the smallest percentage decrease of employment in manufacturing between 1989 and 1994. On the other hand, Romania is not converging towards the EU. It has sustained a protracted economic contraction to the point where it is dismantling its manufacturing sector without making much progress in services⁸ (see both Figure 3 and more detailed analysis below).

While employment in manufacturing stabilised in most countries, the agricultural sector has been losing employment fast in all countries except Romania and Slovenia. All of the central/east European countries are already below the world middle-income averages for the share of employment in agriculture. From this perspective, it is not the high share of agriculture in Poland which is exceptional, but the low share in other transition countries. This can be linked to the forced collectivisation in the past, which was not implemented in Poland.⁹

Within the service sector, the development of the financial services is quite visible, as all the countries moved from a system which neglected the active role of money to one which is based on financial control. But much larger numbers of jobs were created in trade and catering, yet another sector once suppressed by central planners.

Net employment creation in services relates both to “market-oriented services and “non-market-oriented services.”¹⁰ The increase in employment in non-market (public) services may come as a surprise, but it reflects the fact that both social welfare and political control functions were located within the productive sphere in pre-transition socialist economies. An important part of the transition process consisted of

⁸ Romania is a very interesting case for future studies. One interpretation (macroeconomic, demand side) is that the progress in services has been inhibited by insufficient aggregate demand, which in turn is caused by falling productivity in other sectors. Here, we would have the implications of failed restructuring being transformed into longer-term effects. Another (microeconomic, supply side) line of argument is that the development of the new sectors in Romania was inhibited by bureaucratic failure and obstacles to the new firm creation and development (evidence on the latter point: see Dimofte, 2001).

⁹ Bean *et al.* (1998, p. 61) present data on the size of the farming population at the date of accession for cohesion countries. It was correspondingly: 24.1% for Ireland (1973), 30.8% for Greece (1981), 23.8% for Portugal (1986) and 16.2% for Spain (1986). From this point of view, the Polish agricultural sector does not look unique. Moreover, as the comparison of corresponding entries in Tables 1 and 2 reveals, agricultural employment in Poland has been shrinking fast recently. This fact is not always noticed by observers, who concentrate on data based on ownership of farms. Yet, only 43% of private farm households in Poland consider farms as their main source of income at present (Woś, 1999). Thus, the farm owners are strongly pushed to search for their main employment outside agriculture, and the process is captured by ILO-type survey data that this text is based on. No wonder that Polish farmers are notorious in blocking roads. It seems that there is more in it than an inherited inclination to fight against the authorities.

¹⁰ EBRD Transition Reports (1997 and 1999, sections 4.1) include ‘transport and communication’ in ‘market-oriented services’ and shifts ‘other services’ to the ‘non-market-oriented’ sector. The second may be justified by the lack of detailed data. Yet the first is highly questionable, as the old transport sector (most of employment in the ‘transport and communication’ category) was functionally linked to both industry and construction and has been characterised by inefficiency and excessive employment as much (or even more) as the two others.

disentangling specialised welfare services from enterprises (see: Rein *et al.*, 1997). Similarly, with the rise of democratisation, political control by communist party committees within socialist firms was replaced by a diversified government administration, which in many cases had to be created from scratch. The magnitude of the increase in public administration employment is striking. Employment in this sector (excluding defence) increased by 83% in Poland between 1990 and 1996, from 159,000 to 290,000 (GUS, 1997).

4. Reference point: what makes the North EU economies similar?

The assessment of the convergence process implies a benchmark. Following Jackman and Pauna (1997), the chosen comparator structure is based on four high-income northern EU economies (Germany, UK, Denmark and Netherlands).¹¹

Table 3. Employment in thousands, 1998, Northern EU

Category	ISIC3	Denmark	Germany	Netherlands	UK
Agriculture	A+B	96.66	1024	236	465.0
Mining	C	3.20	182	11	99.8
Manufacturing	D	516.03	8461	1104	4986.9
Utilities	E	20.48	305	47	178.6
Construct.	F	177.54	3183	451	1896.0
Trade, rep.	G	367.65	5154	1220	4117.3
Hotels,rest.	H	71.30	1130	267	1238.7
Transp,com	I	181.89	1920	442	1755.5
Finance	J	79.15	1273	264	1184.3
Real Estate	K	227.58	2581	833	2768.0
Administration	L	168.30	3174	525	1563.7
Education	M	198.84	1927	465	2040.8
Health, soc.	N	458.79	3534	1028	2964.1
Other serv.	O	118.49	1826	318	1452.4
Priv.househ	P	5.40	150	22	143.2
Int.Organis.	Q	0.87	36	161	20.7
Not classif.	X	5.20			72.6
TOTAL		2697	35860	7394	26948

Source: ILO (1999).

The corresponding employment figures are presented above.¹²

¹¹ In respect to manufacturing, Germany is an interesting outlier, among the high-income EU economies. The share of industry in employment was still 34.3% in 1998 (services: 62.8% and agriculture: 2.9%). It is related to the specialisation in exports (see section 1 above and in more detail: Rowthorn and Wells, 1987). However, in discussion on this paper it was pointed out that the structural composition may be due to organisational characteristics prevailing in German manufacturing, i.e. internalisation of some business services (this should have corollary related to market structures, as we know from Coase, 1937).

¹² The results for indices based on southern EU (Greece, Portugal, Spain and Italy) are available on request from the author. The southern European economies are placed close to the convergence path between the CEE countries and northern EU (the inclusion of high-income Italy in southern group is justified by the fact that its employment structures are greatly affected by its underdeveloped southern regions).

There are obviously some differences in employment structures of those four countries. How much diversity is lost by creating one index based on averages? To what extent the four high-income EU economies differ between each other? Table 4 presents coefficients of variation for the percentage shares in employment, for all sectors.

Table 4 presents the list of sectors ranked from those with the most similar percentage shares to the most diverse. To get some additional intuition, the sectors were divided into four groups, according to the degree of similarity between the four economies.¹³

Table 4. Coefficients of variation for percentage shares in total employment, Northern EU, 1998

Category	ISIC Code	Coefficient of Variation
<i>Highly similar shares</i>		
Trade and Repair	G	8.27%
Transport, Storage, Communication	I	10.06%
Other Services	O	11.09%
<i>Similar shares</i>		
Utilities	E	13.47%
Education	M	15.36%
Financial Intermediation	J	16.59%
Construction	F	16.98%
Manufacturing	D	18.67%
Public Administration	L	19.26%
Real Estate & Business Activities	K	19.62%
<i>Dissimilar shares</i>		
Hotels & Restaurants	H	23.73%
Health & Social Work	N	24.74%
Agriculture & Fishing	A+B	28.17%
<i>Highly dissimilar shares</i>		
Private Households with Employed	P	39.79%
Mining and Quarrying	C	64.73%

Sectors with dissimilar shares (last two groups of sectors) correspond to the differences in natural endowment and export specialisation, but also to the size and organisation of the welfare system, with the size of health and social work sector much higher in Denmark (17.0% of total employment) than in the other three (between 9.9% and 13.9% of employment). In the category ‘households employed persons’, the UK has the highest share in total employment (0.5%), however this category is too small to

¹³ The division was not arbitrary, i.e. the cuts were made, where the differences between the two adjacent coefficient were highest. Except that ‘mining and quarrying’ and ‘household employed persons’ should be further separated into two categories, one-entry each. They are both included in the ‘most diverse’ category.

have any significant impact on subsequent measures of restructuring. It is interesting to notice that manufacturing is not a diversified category, in spite of the relatively high share in Germany (23.6%). Apparently, patterns of specialisation relate more to branches of manufacturing than to its total aggregate share in employment. In general, the list of similar sectors is not surprising, with the size of trade, transport, finance, construction but also educational system, being similar in all four countries.

Before moving to indices of restructuring, one can use Tables 2 and 3 to find the major structural differences between Northern Europe and Central European accession countries. The comparison reveals that in finance and real estate and other business services, the share of employment is more than twice as large in Northern Europe as in Central Europe (simple averages). The third largest negative difference relates to health services and social work. While the first two categories correspond to the way the modern economic system is organised (supply factors, see above, section 1), the third one is indicative of the level of wealth and higher spending on social consumption (demand factors). It is also interesting to note that difference in shares of education is small and the sector is actually slightly larger in Central Europe on average (as it is affected by both policy choices and demographic structures).

While some ‘market-oriented services’ and ‘public services’ are much larger in Northern Europe than in Central Europe, the reverse is true in relation to the primary sector. In both agriculture and mining, the ratio of the shares of employment in Northern Europe and Eastern Europe is smallest.

5. Structural change: measures of convergence

The employment structures presented above may be used to assess the convergence process on a multidimensional scale. The first measure, ‘restructuring index’ (RI), is taken from Jackman and Pauna (1997). It is defined as “a proportion of the workforce in each country which would need to change sector to enable the country to attain the same structure of employment as that of a comparable Western European economy” (Ibid., p. 377).¹⁴ Thus, the restructuring index has a straightforward, intuitive interpretation, in terms of the extent of intersectoral reallocation of labour force, unlike other measures of similarity, starting with correlation coefficient. A lower value of the index corresponds to less restructuring required for convergence. Based on the above definition, the formula for RI, for country a and comparative structure c , is simply:¹⁵

$$(3) \quad RI = \frac{\sum |s_i^c - s_i^a|}{2}$$

where s relates to shares in employment of sectors i . Results are presented in table 5.

The indices reported here for 1994 may differ from those obtained by Jackman and Pauna for two reasons. First, here, the Northern EU 1998 structure was used for both

¹⁴ Here, as characterised by the Northern EU Group in 1998.

¹⁵ Jackman and Pauna (1997) do not provide formulae for their indices, but there are relatively easy to derive using their Table A (in the appendix).

1998 and 1994, to avoid a problem of “moving goalposts.”¹⁶ We are interested in the convergence process towards the structures prevailing today. Second, the number of categories is doubled, as RI here are based on ISIC-3 instead of ISIC-2 classifications. Thus, the indices could show that more restructuring is required, as there is more cross-sectoral movement. However, in practice the impact of this factor is negligible, as the categories which are expected to shed labour are defined in the similar way by both ISIC-2 and ISIC-3 (primary sector, manufacturing).

Table 5. Restructuring indices: 1994 and 1998

Country	RI-N94	RI-N98
Bulgaria	.	31.1%
Croatia	.	15.9%
Czech Republic	20.5%	18.5%
Hungary	19.8%	17.2%
Poland	27.0%	21.5%
Romania	44.9%	42.5%
Slovakia	23.2%	19.5%
Slovenia	25.4%	23.6%
Estonia	20.0%	18.1%
Latvia	.	24.1%
Lithuania	.	21.6%
Spain	17.2%	15.0%
Greece	23.0%	22.9%
Portugal	17.6%	18.3%

Note: the Czech Republic, Latvia, Greece, Portugal: 1997.

All Central European countries have made some progress in restructuring, with Croatia, Hungary and Estonia being closest to structures found in the Northern EU. This is entirely consistent with figure 3. Similarly, Romania is again an outlier, with employment structures farthest from the EU.

Yet comparison with figure 3 reveals different results for the three South European countries. While Spain is converging (with the 1997 index lower than 1994), there is no indication of a convergent change in either Greece or Portugal. Even if the service sector is growing in these two countries (figure 3), this change has not been convergent recently in terms of the composition of the service sector.

The speed of restructuring is captured by the first column of table 6 below, which corresponds to the new index, which will be called the “pace of restructuring” (PR), defined simply as a rate of change in the restructuring indices:¹⁷

¹⁶ In fact, RI are not affected (in terms of ranking) by the choice of a year. Also, in Mickiewicz and Bell (2000) we present results for 1997.

¹⁷ Jackman and Pauna use a different measure called ‘speed of restructuring’, defined as a proportion of the labour reallocation required for convergence that has taken place during a given period of time (1997, p. 380). The problem with their measure is that it does not take into account the non-convergent changes,

$$(4) \quad PR = (RI_{94} - RI_{98}) / RI_{94}$$

It is easily observed that the rate of change was fastest in Poland: 5.5% of its employment was transferred from old to new sectors within four years. If the transfers remain as high as in the current period, it would take another 16 years to achieve all the transfers necessary to converge with 1998 North European structures (21.5% of employment to be reallocated). It is also interesting to notice that Slovakia comes second and assuming present speed of reallocation, it would take another 21 years to converge.

The pace of restructuring is slowest in Romania and Slovenia, but the problem is more serious for Romania, which has both a high value of the index of (required) restructuring (RI) and a slow pace of change (PR). It is interesting to notice that Spain still has a relatively fast rate of change, comparable with the best-performing Central European economies. One may speculate that this acceleration of structural change in Spain may have something to do with labour market reforms introduced in 1997,¹⁸ however it may be too early to assess its impact yet.

Table 6. “Second order” indices: 1994-1998

	Pace (PR)	Efficiency (EI)	Job creation (JB)	Job destruction (JD)
Czech Rep.	12.9%	79.3%	2.7%	4.8%
Hungary	13.3%	87.7%	2.4%	4.3%
Poland	20.5%	88.8%	8.8%	4.4%
Romania	5.2%	75.8%	3.2%	4.0%
Slovakia	15.9%	82.5%	5.3%	3.3%
Slovenia	7.2%	65.8%	7.7%	0.5%
Estonia	9.6%	69.9%	1.7%	8.2%
Spain	12.8%	64.9%	8.8%	0.8%
Greece	0.4%	48.4%	2.1%	1.2%
Portugal	-5.4%	40.4%	1.4%	4.0%

Note: PR, JC and JD indices were multiplied by (4/3) for the Czech Republic, Greece and Portugal, to make them compatible with others, as computations were based on a shorter period (1994-1997) for those three countries.

The three other indices relate to efficiency, job creation and job destruction. The first is based on Jackman and Pauna’s definition, the other two are new.

The efficiency measure shows “the proportion of the total employment change that has been convergent towards the warranted structure” (Jackman and Pauna, 1997, p. 380). The computational equivalent of this definition is relatively more complex than the previous two indices, as we have to take into account the possibility of overshooting. If e_i relates to the level of employment, s_i to the percentage share in total

which may counterbalance the impact of convergent shifts. In the latter case, the index of speed would remain high, with no change in the distance from target structures.

¹⁸ On those, see: Guell-Rotllan and Petrongolo (2000).

employment (both in sector i), and E to total employment, the comparator level of employment is given by: $e_i^c = s_i^c E^{98}$.

Next, using comparator level of employment, we may define convergent change in sector i in the following way:¹⁹

(5) *def.* Δe_i^{con} :

$$\Delta e_i^{con} = \min(e_i^{98} - e_i^{94}, e_i^c - e_i^{94}) \text{ for } e_i^{98}, e_i^{94}, e_i^c: \text{sign}(e_i^{98} - e_i^{94}) = \text{sign}(e_i^c - e_i^{94}) = 1$$

$$\Delta e_i^{con} = \max(e_i^{98} - e_i^{94}, e_i^c - e_i^{94}) \text{ for } e_i^{98}, e_i^{94}, e_i^c: \text{sign}(e_i^{98} - e_i^{94}) = \text{sign}(e_i^c - e_i^{94}) = -1$$

$$\Delta e_i^{con} = 0 \text{ for } e_i^{98}, e_i^{94}, e_i^c: \text{sign}(e_i^{98} - e_i^{94}) = \text{sign}(e_i^c - e_i^{94}) = 0$$

$$\Delta e_i^{con} = 0 \text{ for } e_i^{98}, e_i^{94}, e_i^c: \text{sign}(e_i^{98} - e_i^{94}) \neq \text{sign}(e_i^c - e_i^{94}).$$

And the efficiency index (EI) is given by the ratio of convergent change to total change in employment:

$$(6) \quad EI = \frac{\sum \Delta e_i^{con}}{\sum |e_i^{98} - e_i^{94}|}$$

The intuition behind this measure is that all sectoral changes are costly; therefore, non-convergent changes should be avoided. For instance, if employees are moving back from industry to agriculture, only to move again to services in the future, an avoidable social cost is involved. In general, it may be plausible to assume that the liquidation of jobs in a given sector leads to higher risk of unemployment, as those jobs are “replaced” by new in another sector (in contrast to a situation where jobs shift between different firms within the same sector). The more structural changes, the higher the chance that transfers to “new” sectors would become more difficult (say, in terms of necessary retraining), some human capital would be lost and also that new employment will be less productive, at least initially. Therefore, “unnecessary” structural changes are not efficient. The primary example of inefficient change is a ‘backward’ movement towards agriculture, which will be reversed in the future.

In general, Central European countries are doing well on this measure, with Poland and Hungary scoring best. On the other hand, relatively low figures for Greece and Portugal are noticeable. It is possible to argue that the process of change was becoming noisier for the countries closer to the benchmark EU group. However, structural differences between these two countries and the EU (i.e. the restructuring indices presented in Table 6) are not much different from those for Central Europe. Thus, the reason why the process is becoming noisier may be related to the differences in patterns of specialisation in southern and northern EU.

¹⁹ Again, this definition is derived from table A of Jackman and Pauna (1997), even if the explicit formula is not given there.

The two final measures attempt to distinguish between structural changes brought by job destruction in ‘old’ sectors and job creation in ‘new’ sectors. They are different from the measure used by Jackman and Pauna (1997), called “new job creation”. The latter one is described by “the number of new jobs created in the sectors with deficient employment as a proportion of the total new job creation required for convergence” (Ibid., p. 381). “Sectors with deficient employment” relate to those, for which the initial levels of employment are lower than those derived from comparator structure imposed on final level of employment ($e_i^c = s_i^c E$, as discussed above). Yet, there are two problems with the Jackman and Pauna index:

First, it does not correspond to actual computations presented by the two authors. A check on data, shows that, similarly to efficiency index, Jackman and Pauna take only convergent new job creation, that is, exclude overshooting in deficient sectors. That is, a more exact definition of the index should possibly read: the actual convergent job creation as a proportion of the total job creation required for convergence.²⁰

The second problem is even more serious. Convergence is defined by imposing comparator shares of employment on actual final aggregate level of employment. Yet, the aggregate level is affected by both actual job destruction and actual job creation. Whenever the resulting aggregate change in employment is small, the ‘new job creation’ index will show higher values. Thus, the index does not measure job creation, but, implicitly, the relation between job creation and job destruction, because the final level of employment is affected by the latter. The more general problem still is that any change in sectoral employment cannot be defined *a priori* as convergent, without reference to changes in other sectors, as they affect final level of employment.

Here, the proposed solution is to separate entirely job creation from job destruction. Therefore, the new proposed index is called ‘job creation’ (JC). First, job creation (in ‘deficient’ sectors) is defined as:

(7) *def.* Δe_i^{cre} :

$$\Delta e_i^{cre} = e_i^{98} - e_i^{94} \quad \text{for } e_i^{98}, e_i^{94}, e_i^c: \quad \text{sign}(e_i^{98} - e_i^{94}) = \text{sign}(e_i^c - e_i^{94}) = 1$$

$$\Delta e_i^{cre} = 0 \quad \text{for } e_i^{98}, e_i^{94}, e_i^c: \quad \text{sign}(e_i^{98} - e_i^{94}) = \text{sign}(e_i^c - e_i^{94}) = -1$$

$$\Delta e_i^{cre} = 0 \quad \text{for } e_i^{98}, e_i^{94}, e_i^c: \quad \text{sign}(e_i^{98} - e_i^{94}) = \text{sign}(e_i^c - e_i^{94}) = 0$$

$$\Delta e_i^{cre} = 0 \quad \text{for } e_i^{98}, e_i^{94}, e_i^c: \quad \text{sign}(e_i^{98} - e_i^{94}) \neq \text{sign}(e_i^c - e_i^{94}).$$

And ‘job creation’ index is given by:

²⁰ More formal definition of convergent new job creation may be easily constructed by setting Δe_i^{con} in the second row of (5) equal to zero, that is, by excluding convergent job destruction from efficiency index.

(8)

$$JC=\frac{e_i^{98}-e_i^{94}}{e_i^{94}},$$

which is the ratio of job creation in deficient sectors to initial level of employment.

Following similar logic, we can construct ‘job destruction’ index, first by defining job destruction (in ‘overpopulated’ sectors):

(9)

$$\text{def. } \Delta e_i^{des} :$$

$$\Delta e_i^{des} = 0 \qquad \text{for } e_i^{98}, e_i^{94}, e_i^c: \quad \text{sign}(e_i^{98} - e_i^{94}) = \text{sign}(e_i^c - e_i^{94}) = 1$$

$$\Delta e_i^{des} = |e_i^{98} - e_i^{94}| \qquad \text{for } e_i^{98}, e_i^{94}, e_i^c: \quad \text{sign}(e_i^{98} - e_i^{94}) = \text{sign}(e_i^c - e_i^{94}) = -1$$

$$\Delta e_i^{des} = 0 \qquad \text{for } e_i^{98}, e_i^{94}, e_i^c: \quad \text{sign}(e_i^{98} - e_i^{94}) = \text{sign}(e_i^c - e_i^{94}) = 0$$

$$\Delta e_i^{des} = 0 \qquad \text{for } e_i^{98}, e_i^{94}, e_i^c: \quad \text{sign}(e_i^{98} - e_i^{94}) \neq \text{sign}(e_i^c - e_i^{94}),$$

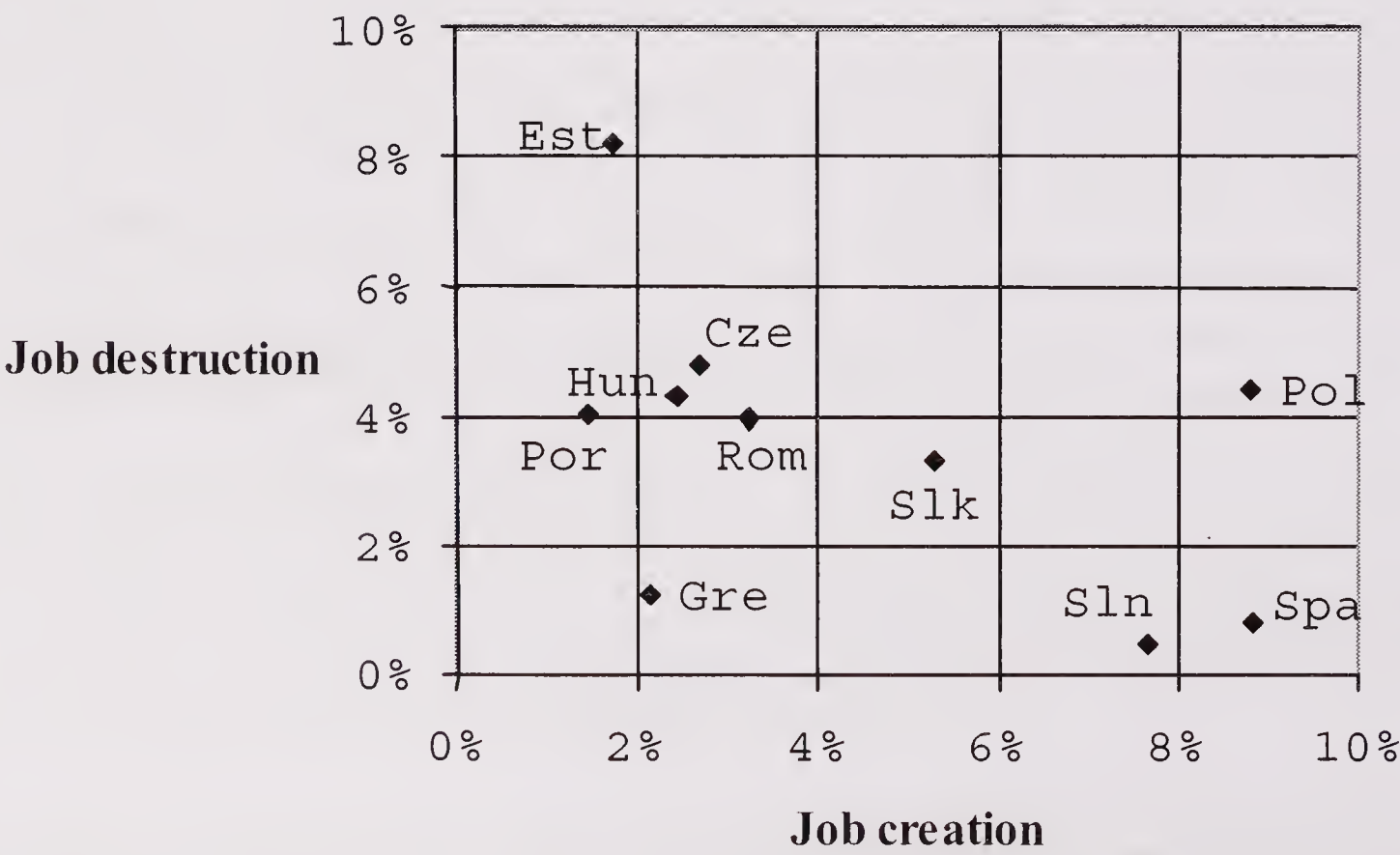
and next by identifying the ‘job destruction’ index as:

(10)

$$JD = \frac{\sum \Delta e_i^{des}}{E_{94}}.$$

Values for both indices are presented in table 6, above. Comparison between the “job creation” (in deficient sectors) and “job destruction” (in overpopulated sectors) is instructive.

Figure 4. Decomposition of restructuring



Approximately, it amounts to the decomposition of structural adjustment, i.e. the sum of the two indices is strongly correlated with the “pace of restructuring” index (see table 6). Yet, this decomposition helps to distinguish between the countries where restructuring was done mostly by liquidating jobs in “old” sectors and those, where change was achieved by job creation in the “new” sectors. The result is presented in figure 4.

The comparison between Poland and Slovenia is interesting. Both countries have been characterised by a high rate of job creation in ‘new’ sectors. Yet, in Poland there was parallel destruction of jobs in ‘old’ sectors, while in Slovenia those are not downsizing. Interestingly, the position of Slovenia is very similar to Spain in this respect. As a result, the aggregate pace of restructuring (PR index, table 6) is much faster in Poland than both in Slovenia and Spain. The case of the two latter countries may be also contrasted with Estonia. It is a country, where the pace of restructuring is similar to Slovenia, however it is predominantly achieved by job destruction in old sectors, without corresponding job creation in new sectors.²¹ Hungary and the Czech Republic are both characterised by relatively radical downsizing of old sectors, similar to Poland. However, the process of job creation in new sectors is slower than in Poland, Slovenia and Slovakia. It is interesting to notice that the position of Romania is close to Hungary and the Czech Republic. The reason why the pace of restructuring (see: table 6) is much lower in Romania in spite of radical changes in employment structures, is that those are dominated by non-convergent flows, not accounted for by figure 5 (inflow back to agriculture, in particular). Finally, there is almost no structural change in Greece, along both dimensions, which is confirmed by the value of the PR index close to zero.

6. Pace of restructuring and unemployment

The differences between individual countries, as illustrated by figure 6, show that there are alternative paths of restructuring. Radical job shedding is not the only possible way. This conclusion has important implications for labour markets. If it is true, then the corollary is that unemployment is not a necessary prerequisite for restructuring. This is a point reiterated by Jackman (1998).

However, for transition countries, job shedding in *old sectors* typically resulted in an increase in unemployment, even if most flows were between jobs (at least in the initial phase). Additionally, the effect of restructuring was in some cases mitigated by

²¹ It is interesting to notice that Estonia has also the largest informal sector (hidden economy) among the seven countries discussed here, according to the estimates presented by Lacko (2000). Rapid job destruction in old sectors may be correlated with emergence of large informal sectors; this is characteristic not only for Estonia, but also for the two other Baltic States and CIS as contrasted with Central Europe. The presence of the informal sector distorts any employment statistics. Yet, from the perspective of economic growth, the problem may not be so important as it appears. Informal activities are typically located in low value-added branches, with no potential for growth (see: de Soto, 1989). Thus, even if excessive employment in agricultural or unemployment is in fact equivalent to employment in the informal sector, all three may in fact be pooled together as a ‘reserve sector’, as described in section 1. As productivity in all the three sectors is either zero (unemployment) or close to zero in relative terms, the classification would not change negative implications for economic development.

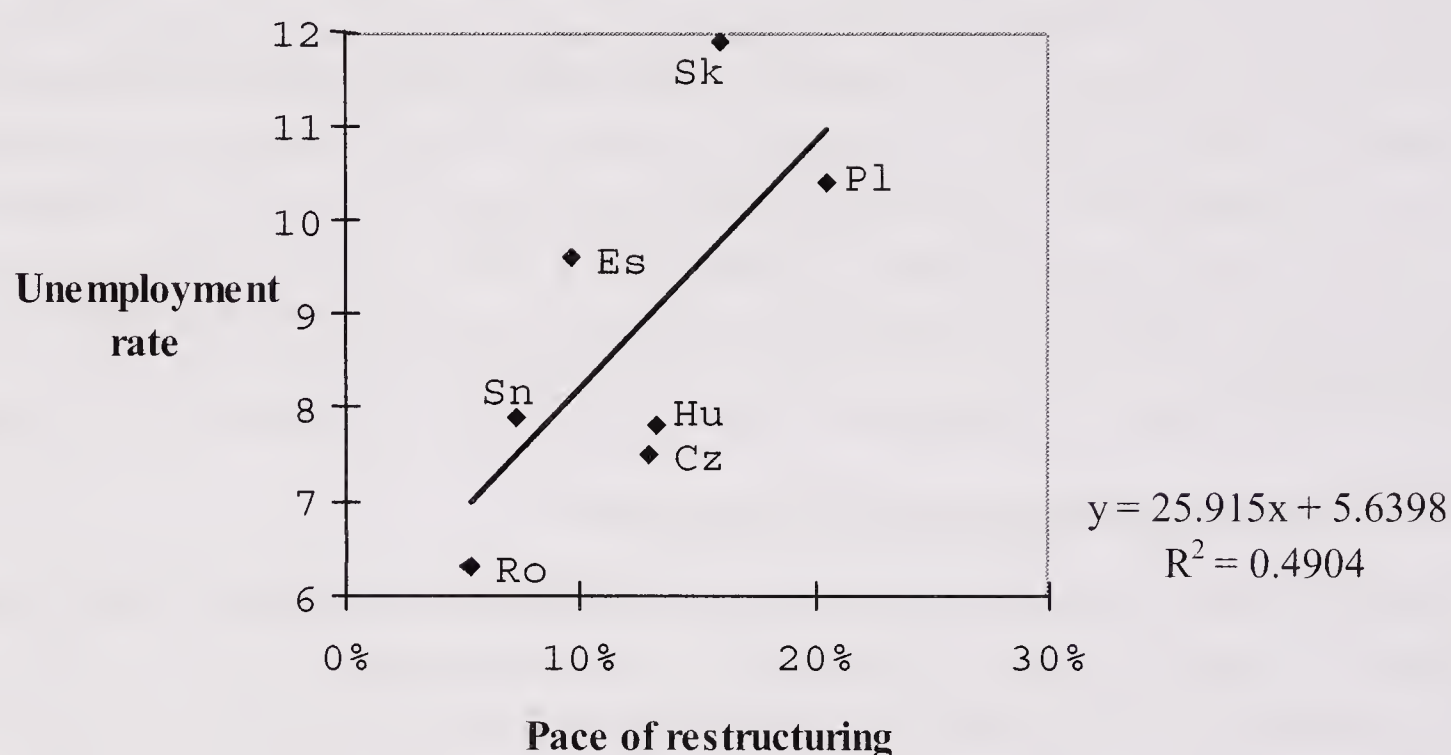
outflows outside the labour force – in Hungary in particular (Mickiewicz and Bell, 2000, chapter 1).

Yet, the evidence seems to be mixed. Jackman and Pauna (1997) produce a scatter diagram showing no relationship between convergent job creation in new sectors and unemployment. Indeed, the impact of availability of new jobs on unemployment may be ambiguous. While directly reducing unemployment by some outflows, new jobs may also lead to increased separations and additional search activity.

However, there seems to be some link between our new global measure of restructuring (“pace of restructuring”, as defined above) and unemployment. This is illustrated by figure 5, below. The “pace of restructuring” index is for 1994-1998 and figure for unemployment for 1998.

While figure 5 does not prove anything, it indicates that at least part of unemployment may be explained by turbulence created by inter-sectoral restructuring processes. It supports conclusions on the link between restructuring and unemployment derived from empirical research on micro level (see esp. Newell and Pastore, 1999).

Figure 5. Pace of restructuring and unemployment



7. Reforms, incomes per capita and restructuring

As already discussed, transition countries started with distorted employment structures. They do not conform yet with the typical relationship between structures and income levels, as illustrated by figure 1. Simple econometric checks reveal no relationship between income levels and structures. Structural evolutions in transition countries seem to be affected by the speed of reforms, not by the GDP levels.

Table 7 and figures 8-10 below present the results of regressions, with 1998 restructuring indices and income levels as independent variables, and two different measures of structural reforms as dependent variables.

Table 7. RI explained by transition indicators, EU accession criteria and GDP per capita (1998)

	(1)	(2)	(3)
Constant	0.91 (0.20)**	0.88 (0.17)***	0.83 (0.13)***
Average of 8 EBRD indicators	-0.17 (0.05)*	-0.16 (0.42)***	
Average of 3 enterprise indicat.			-0.17 (0.04)**
GDP per capita in \$, PPP	-0.00 (0.05)		
R ²	0.62	0.61	0.70
Adjusted R ²	0.53	0.57	0.67
F-statistics	6.53*	14.3***	21.1**
Number of observations	11	11	11

Notes: LOS, standard errors in parentheses; * - significant below 0.05 level; ** - significant below 0.005 level; *** - significant below 0.001 level.

Source: GDP data (purchasing power parity) from the World Bank Atlas 2000.

The most widely used aggregate measure of institutional reforms is the one constructed annually by the European Bank for Reconstruction and Development. Therefore, in equation 1 (table 7) average values of eight indicators measuring the progress of transition (EBRD, 1999, Table 2.1, page 24) were used as an explanatory variable²², together with GDP per capita. Results reveal that income per capita has no explanatory power whatsoever, while the reform measure is significant, despite a small number of observations (11) and controlling for income levels. In equation 2, income per capita is excluded, and the results are also illustrated by figure 6.

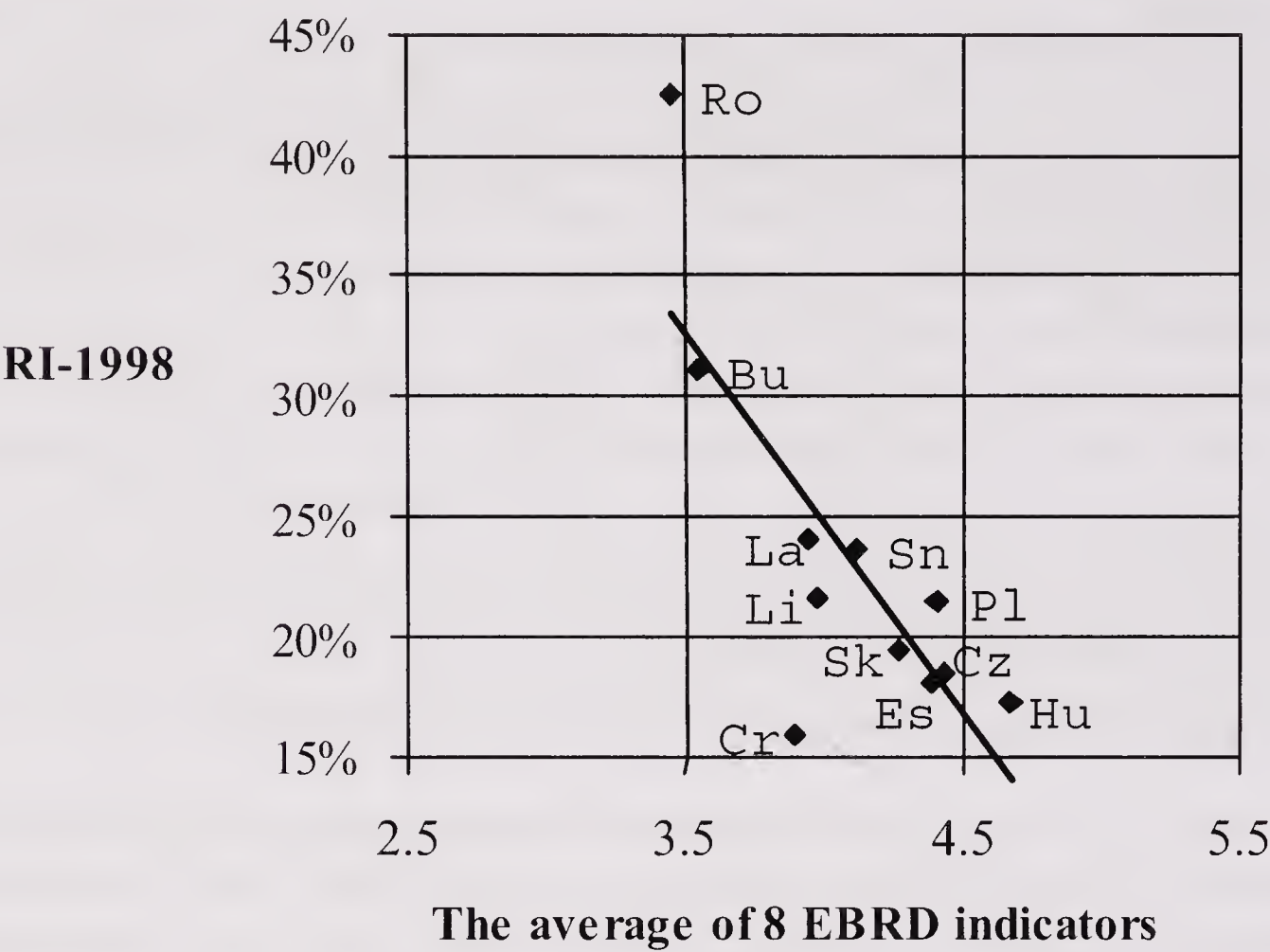
The link between liberalisation and restructuring is clear. It would become even stronger, if Romania was excluded, as the country is an outlier in the region in terms of structures of employment. While Romania has the highest positive residual, Croatia has the highest negative. It is characterised by structures of employment, which are most similar to the North-EU comparator, yet this is accompanied by a relatively less advanced reform process. The results are more consistent for Hungary, which is most advanced in terms of reforms and second after Croatia in terms of structural convergence.

We may further investigate, which of the eight EBRD indicators are most strongly related to the restructuring outcomes. Examination of correlation coefficients for all indices shows that the three most important factors are: “large-scale privatisation”, “small-scale privatisation” and “governance and restructuring”. Together, they all form a group of indices described jointly by EBRD reports as “enterprise reform”.

Thus, we have the interesting, if not unexpected result: the progress in employment restructuring is mostly related to the privatisation and corporate governance reform.

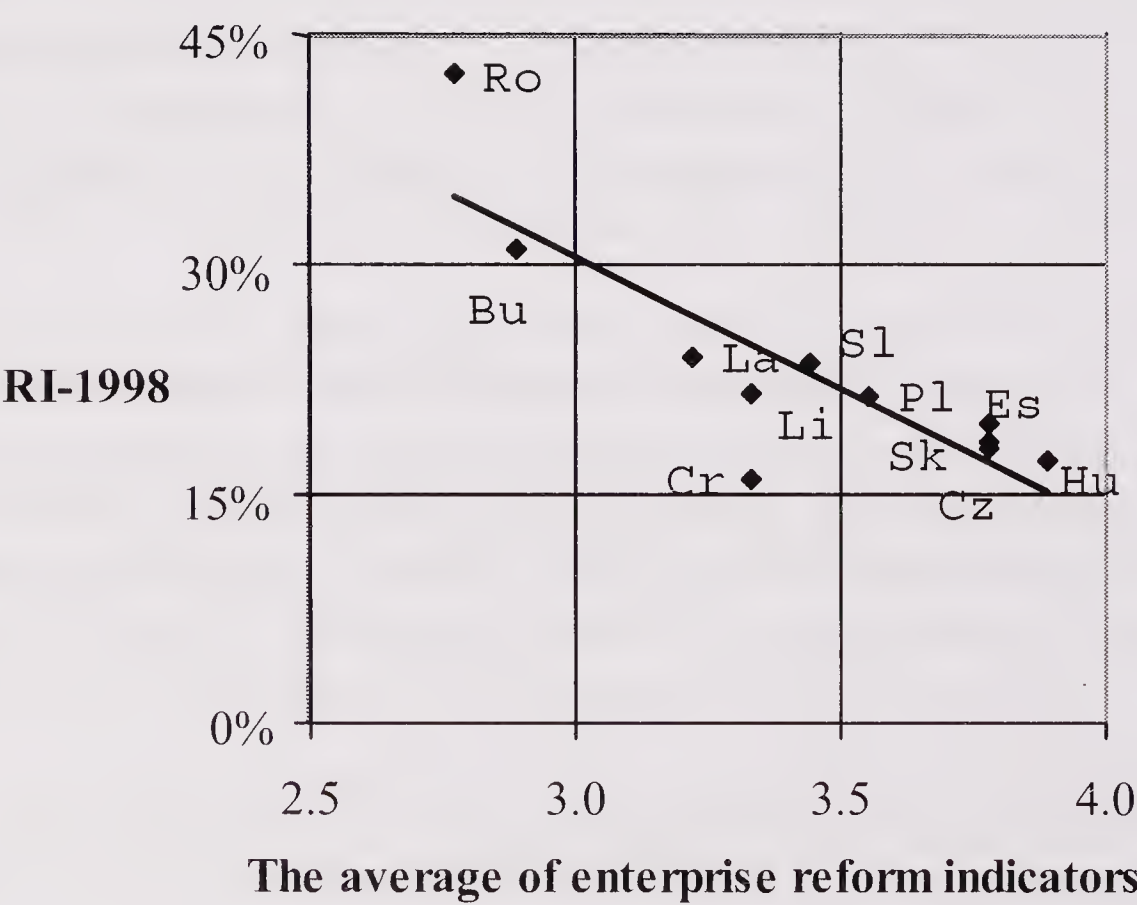
²² EBRD indicators relate to: large-scale privatisation, small-scale privatisation, governance and enterprise restructuring, price liberalisation, trade and foreign exchange system, competition policy, banking reform and interest rate liberalisation, securities markets and non-bank financial institutions. The scores are: 1, 1+, 2-, 2, 2+, 3-, 3, 3+, 4-, 4, 4+. Here, minuses were transformed into -0.333 and pluses into +0.333. Nuti (1999) uses a different transformation for his comparisons between reforms and GDP growth: pluses into +0.5 and minuses into -0.5. However, that eliminates any distinction between scores different from round numbers.

Figure 6. Restructuring and EBRD transition indicators



Thus, instead of average transition indicators, we may narrow down our explanation and interpret restructuring as dependent on the average of the three enterprise reform indicators. The results are presented by equation 3 (table 7) and figure 7.

Figure 7. Restructuring and enterprise reform



The explanatory power of this equation is stronger. Thus, there is reason to believe that it is the enterprise reform, which is mostly responsible for the restructuring

processes. The location of a transition economy on a spectrum between deindustrialisation and successful convergence with the EU seems to be determined by the extent to which reforms have been introduced, in particular, by the extent to which the enterprise reform was successfully implemented. Reform of corporate governance is crucial for efficient downsizing of 'old' sectors. Legal framework, which supports development of small private firms, is important for the growth of 'new' sectors.²³

8. Conclusions

Lack of impact of income levels on structures (demonstrated in section 7) indicates that the transition economies are still on their specific structural adjustment path.

On the other hand, the characteristics of the structural adjustment paths are affected by the speed of reforms, enterprise reform in particular.

We identified two broad types of the structural adjustment paths: vertical and horizontal. Both terms relate to the diagrammatic illustrations of those paths, where the share of services is given on the horizontal axis, the share of industry on the vertical axis and the share of agriculture is implicit.

Vertical path corresponds to the situation, where the share of employment increased in agriculture after transition and the service sector remains underdeveloped. Within the sample of economies we consider, the examples of this path relate to Romania, Russia and Ukraine. Those are also the countries, where the reform process was less consistent.

Horizontal path relates to the mode of adjustment, where the decrease in the share of industry is slower, but the build-up of the service sector is faster. As a result, the share of agriculture decreases as well. Empirical examples include Visegrad-4 (the Czech Republic, Hungary, Poland and Slovakia), Estonia and Croatia. All those countries score well in terms of the reform indicators.

In addition, our measures of restructuring enable to disaggregate structural change into two processes: job creation in the new sectors and job destruction in the old sectors. Both lead to structural change, which facilitates economic growth. Poland would be an example of the structural evolution, which was brought about more by job creation in new sectors than by job destruction in the old sectors. Estonia relates to a reverse case.

We also found some additional support for the thesis that structural change results in higher unemployment. That implies some optimum pace of structural change, as part of transitory high unemployment may be transformed into higher equilibrium rate of unemployment, given that the long-term unemployed are losing skills, and their negative impact on the wage pressure tends to decrease with time (Mickiewicz and Bell, 2000).

²³ This conclusion is supported by one more interesting distinction. The correlation coefficients between RI-1998 and the three individual indicators were: with large-scale privatisation -0.66, small-scale privatisation -0.81, and governance and enterprise restructuring -0.86. The same order of results was obtained for 1997 and are available on request. Thus, it is clear that privatisation of large enterprises was probably less relevant than both introduction of efficient corporate governance and full implementation of small-scale privatisation.

References

- Bean, C., Bentolila, S., Bertola, G., Dolado, J. (1998), *Social Europe: One for All?*, Centre for Economic Policy Research, London.
- Berg, A., Borenstsztein, E., Sahay, R., Zettelmeyer, J. (1999), 'The Evolution of Output in Transition Economies: Explaining the Differences', *IMF Working Paper*, 73.
- Blanchard, O. (1997), *The Economics of Post-Communist Transition*, Oxford University Press, Oxford.
- Blanchard, O., Kremer, M. (1997), 'Disorganisation', *Quarterly Journal of Economics*, 112, 4, pp. 1091-1126.
- Coase, R. (1937), 'The Nature of the Firm', *Economica*, 4, pp. 386-405.
- De Soto, H. (1989), *The Other Path. The Invisible Revolution in the Third World*, Harper and Row, New York.
- Dimofte, C. (2001), 'In the Labyrinth', *Transition*, 12, 2, pp. 23-26.
- Dohrn, R., Heilemann, U. (1993), 'Structural Change in Eastern Europe', in: Heitger, B., Waverman L., (eds.), *German Unification and the International Economy*, Routledge, London, pp. 83-112.
- Dohrn, R., Heilemann, U. (1996), 'The Chenery Hypothesis and Structural Change in Eastern Europe', *Economics of Transition*, 4, 2, pp. 411-425.
- EBRD (1997), *Transition Report. Enterprise Performance and Growth*, European Bank for Reconstruction and Development, London.
- (1998), *Transition Report. Financial Sector in Transition*, European Bank for Reconstruction and Development, London.
- (1999), *Transition Report. Ten Years of Transition*, European Bank for Reconstruction and Development, London.
- Filer, R. (1997), 'Comment on Unemployment and Reform of Social Policy', in: Zecchini, S. (ed.), *Lessons from the Economic Transition*, Kluwer, Dordrecht, pp. 373-392.
- Guell-Rotllan, M., Petrongolo, B. (2000), 'Workers' Transitions from Temporary to Permanent Employment: The Spanish Case', *Centre for Economic Performance Discussion Paper*, 438.
- GUS (1997), *Rocznik Statystyczny Pracy*, Główny Urząd Statystyczny, p. 48.
- Havrylyshyn, O., Izvorski, I., van Rooden, R. (1998), 'Recovery and Growth in Transition Economies 1990-1997: A Stylized Regression Analysis', *IMF Working Paper*, 141.
- Hoshi, I., Mladek, J., Sinclair, A. (1998), 'Bankruptcy and Owner-Led Liquidation in the Czech Republic', in: Balcerowicz, L., Gray, C. W., Hoshi, I. (eds.), *Enterprise Exit Processes in Transition Economies*, CEU Press, Budapest, pp. 129-174.

- Hughes, G., Hare, P. (1992), 'Industrial Policy and Restructuring in Eastern Europe', *Oxford Review of Economic Policy*, 8, 1, pp. 82-104.
- ILO (1996), *World Employment 1996/1997. National Policies in a Global Context*, International Labour Office, Geneva.
- (1998), *Yearbook of Labour Statistics*, International Labour Office, Geneva.
- (1999), *Yearbook of Labour Statistics*, International Labour Office, Geneva.
- Jackman, R. (1998), 'Unemployment and Restructuring', in: Boone, P., Gomulka, S., Layard, R., (eds.) *Emerging from Communism. Lessons from Russia, China and Eastern Europe*, MIT Press, Cambridge MA.
- Jackman, R., Pauna, C. (1997), 'Labour market policy and the reallocation of labour across sectors', in: Zecchini, S. (ed.), *Lessons from the Economic Transition*, Kluwer, Dordrecht, pp. 373-392.
- Lacko, M. (2000), 'Hidden Economy – an Unknown Quantity? Comparative Analysis of hidden economies in transition countries, 1989-1995', *Economic of Transition*, 8, 1, pp. 117-149.
- Mickiewicz, T., Bell, J. (2000), *Unemployment in Transition. Restructuring and Labour Markets in Central Europe*, Harwood Academic Press, Amsterdam.
- Newell, A., Pastore, F. (1999), *Industrial Restructuring and Regional Unemployment in Poland*, paper presented at the CEPR/ESRC Workshop on "Wages, Employment and Labour Market Policies in Transition Economies, University of Sussex, mimeo.
- Nuti, M. (1999), *Transition Laggards: The Cases of Belarus and Uzbekistan: Why Don't They Change and How Do They Work?*, London Business School, mimeo.
- Rein, M., Friedman, B., Worgotter, A. (eds.) (1997), *Enterprise and Social Benefits after Communism*, Cambridge University Press, Cambridge.
- Rowthorn, R., Wells, J. (1987), *De-Industrialization and Foreign Trade*, Cambridge University Press, Cambridge.
- UN (1997), *Statistical Yearbook 1995*, United Nations, New York.
- Urban, W. (1999), 'Patterns of Structural Change in Manufacturing Industry in Central and Eastern Europe', in: Dyker, D., Radosevic, S., *Quantitative Studies for Science and Technology Policy in Central and Eastern Europe*, IOS Press, Oxford.
- Woś, A. (1999), 'Rolnictwo jest częścią całości', *Rzeczpospolita*, 6-7 February, p. 7.

The Viability of the Baltic Way towards Convergence and the European Union

Gábor Orbán

This study analyses the way the three Baltic States (Estonia, Latvia and Lithuania) have chosen to respond to the requirement of converging both in nominal and real terms to the European economy. I begin by describing the successful convergence process and the conflicts and problems that policymakers necessarily come across while looking for the optimal policy framework. The main findings include the explanation of the viability of the fixed exchange regime and the sustainability of large current account deficits. The paper also makes an attempt to point to some of the long-run shortcomings of the system the Baltic countries have opted for.

1. Introduction

Pre-accession countries are particular in the sense that they are faced with the simultaneous challenge of catching up to the development level of advanced EU countries and joining the common currency area. This requires from them active nominal and real convergence.

Several authors point to potential conflicts between nominal and real convergence of pre-accession economies and analyse the different cases for exchange rate regimes from the point of view of the managing of these conflicts. Studies such as Gáspár (2001) come to the conclusion that a relatively flexible alternative fosters convergence and helps most in managing the trade-offs between nominal and real convergence.

Having accepted this, however, we are confronted with the counter-example of the Baltic States: Estonia, Lithuania and Latvia. These countries adopted hard pegs early on in the last decade and still seem to be faring well as far as convergence is concerned. The problem dealt with in this paper is how these countries could have been successful in avoiding the risks usually associated with achieving convergence while maintaining a fixed exchange rate regime.

In the first section of the paper I shall outline the most important conflicting points between real and nominal convergence with special regard to pre-accession economies. In the second part, it will be necessary to point out some key factors that make fast liberalisation of the capital account together with hard pegs a rather risky choice for pre-accession countries in general, not least because of its potential negative effect on the pursuit of real and nominal convergence at the same time. In the next section, I shall try to give empirical evidence (using economic indicators from ICEG) to support the statement that these countries have been converging to the EU levels both in nominal and in real terms in past years, while running major foreign deficits every year. In the remaining part of the paper, I shall point to some specifics of the Baltic States that might explain the viability of the large current account (CA) deficit and the different path in general followed by these states, toward convergence and the EMU.

2. Conflicts between nominal and real convergence

According to Gáspár (2001) real convergence may accelerate after nominal criteria are met, but the two objectives may also be in conflict. In the following paragraphs I shall highlight potential conflicts and trade-offs associated with the particular economic situation of pre-accession economies, with special reference to those most relevant for the Baltic States.

There are several channels through which nominal convergence can support real convergence and vice versa. To give some examples, we must mention that price stability and fiscal soundness are generally reflected in lower interest rates, exchange rate stability on the other hand creates better conditions for exports, which are all preconditions for higher growth. At the same time, growth allows for more non-inflationary wage increases and for a better fiscal consolidation, which help meet the nominal criteria.

Contrary to such synergetic effects, nominal criteria may be in conflict among themselves or work against real convergence. Exchange rate-based stabilisation was widely used in Central and Eastern Europe as part of the disinflation efforts, because of the relatively high degree of exchange rate passthrough. First, the output costs of disinflation increase the lower the rate of inflation, thus economic growth may be suppressed in order to meet the inflation criterion.

Second, the Balassa-Samuelson effect described by e.g. Halpern and Wyplosz (1998) makes the fulfilment of the inflation criterion particularly difficult for pre-accession countries. Dividing the economy into tradable and non-tradable sectors¹, we see that there is a marked trend of productivity increases in the former one which is not the case for the latter, and yet the wage level is equalised on a national basis. This contributes to a large-scale appreciation of the real exchange rate, and ultimately results in either the strengthening of the currency in nominal terms (in case of a flexible exchange rate regime), or creates inflationary pressures independent of policy decisions (in a fixed regime). In both cases, one of the nominal criteria – either the reduction of exchange rate volatility or low inflation – is impossible to meet, which is why inflation targeting systems introduced by several of the central banks of pre-accession countries do not support exchange rate stabilising policies.

Real exchange rate appreciation driven by real convergence is the source of another type of risk as well. In a small economy open to massive capital flows as Central and East European countries, an overvalued exchange rate can lead to current account sustainability problems, especially with domestic savings being as low as they are and given vulnerable financial systems. Reduced exchange rate volatility improving conditions for foreign trade can also shoot back on real convergence if the exchange rate is fixed and misalignment problems occur. In this situation, the misalignment problem can only be remedied through loss in credibility, whose costs would exceed those of the original problem. This argument points to the relevance of the analysis of current account sustainability, given the high risk of currency and banking crises, which, needless to say, would significantly delay both real and nominal convergence in these countries.

¹ Industries that compete with foreign products are taken as tradables, the rest as non-tradables.

Fourth, a slower convergence of interest rates is a general phenomenon among the countries in question. On the one hand, this is explained by the so-called “convergence play”. This argument points to the fact that although expected price convergence and the EU-accession in perspective suppress long-term interest rates in Central and Eastern Europe, due to short term risks and potential sources of instability, the region is still perceived as emerging markets by investors, which keeps risk premia relatively high. Real exchange rates thus remain high and drive up real exchange rates, and as a consequence, the risk of crises referred to above are not negligible. On the other hand, in countries where sterilised intervention is a major policy tool in managing capital inflows, interest rate differentials are unlikely to disappear.

Fifth, the pressure to maintain a reasonable (flow and stock) fiscal position can have negative effects on real convergence, for that would require strategic capital investment by the government. Most of the countries did not use upturns in economic performance to improve the budget balance, so problems are to occur at the “bust” part of the cycle. The risk is increasingly high when public debt is large, imposing a burden on the budget and lowering fiscal authorities’ capacity to absorb shocks. Institutional reforms in the social security systems yet to come in these countries will only worsen that.

3. Liberalisation and the choice of exchange rate regimes

Small open economies in general are exposed to various instabilities, among them speculative short-term capital flows. Empirical results from Edwards (2001) support the view that emerging economies are different in the way they are affected by capital market liberalisation. Therefore, pre-accession countries were advised to pay attention to the sequencing of the liberalisation process.

As regards exchange rate regimes, in the early 1990s pegs were popular among Central and East European countries, and were used as an external anchor of inflation. With stabilisation becoming less of a need, these regimes shifted toward more flexible arrangements. By the end of the decade, according to the hollowing-out hypothesis given by Fischer (2001), the general trend in the choice of exchange rate regimes is a shift toward corner solutions, that is maintaining either a “hard peg” or a flexible regime, in-between solutions being considered more crisis-prone.

Pre-accession countries were advised to follow more flexible exchange rate policies (pegging their currencies to the euro within a broad band), which is supposed to increase their capacity to handle conflicts between nominal and real convergence. The main benefit of this approach advocated by the European Commission is that it supports the fulfilment of nominal convergence criteria, while fostering real convergence, especially because it allows for substantial exchange rate appreciation.

The Baltic States have followed a different path from the rest of the pre-accession countries in several respects. They are extremely small and open, still opted for fixed exchange rate regimes and liberalised their capital accounts relatively early and fast, well before having a strong financial system. Adopting a very hard peg can also help in managing some of the conflicts pointed to in the previous paragraphs. It allows efficient nominal convergence through the decreasing of country and exchange rate

risk, lowering inflation and interest rates (while the exchange rate criterion no longer makes any sense). Growth is supported by lower nominal and real interest rates and by exchange rate stability.

Nevertheless, there are considerable risks involved. For Baltic States with fixed exchange rate regimes, the most relevant problems out of the ones outlined in the previous section are potential exchange rate misalignment, that is real exchange rate appreciation and the resulting current account sustainability problems. This, coupled with the losing of investor confidence has resulted in the case of many countries in financial crises, which had a long-term impact on growth and general welfare. A banking crisis can be especially damaging with the central bank deprived of its function as lender of last resort. The recent example of Argentina has shown that while economies with hard pegs are more resistant to sudden speculative attacks coming from capital markets, the real costs of adjustment are higher.

4. Real and nominal convergence in the Baltic States

The narrowing of the gap between the income, wage and price levels of pre-accession economies and that of the European Union is described with the concept of real convergence. On the other hand, nominal convergence is the term for the process in which countries meet the inflation, interest rate and fiscal criteria of the Maastricht-Treaty.

The Baltic States have in common their size and level of development, as well as their real and financial openness. The data available underline the fact that these countries have performed reasonably well in both nominal and real terms.

Before 1991 around 95% of Estonia's outside trade was with the USSR (Sutela, 2002). The same is true for Latvia and Lithuania. The dependence on the Russian market delivered a huge blow when the Soviet bloc collapsed in 1991. GDP declined by 40% in the Baltic region as a whole and was accompanied by hyperinflation in 1991-92. The data below indicate that a favourable trend is leading the Baltic states out of their initial disadvantageous conditions.

The stabilisation programme and the introduction of credible fixed exchange rate regimes in the early 1990s was successful in bringing down the inflation rate close to EU-levels.

Estonia established its DEM-based currency board in 1992, Lithuania a dollar-based one in 1994² and Latvia has maintained a very hard peg to the SDR since 1994. Responsible fiscal policy has also supported disinflationary efforts and the convergence of interest rates. Another important point in explaining the fair inflation performance is that factors increasing labour market inflexibility do not result in inflationary pressures through higher wages, but are reflected in alarmingly high levels of unemployment (16.6% in Lithuania according to ILO methodology).

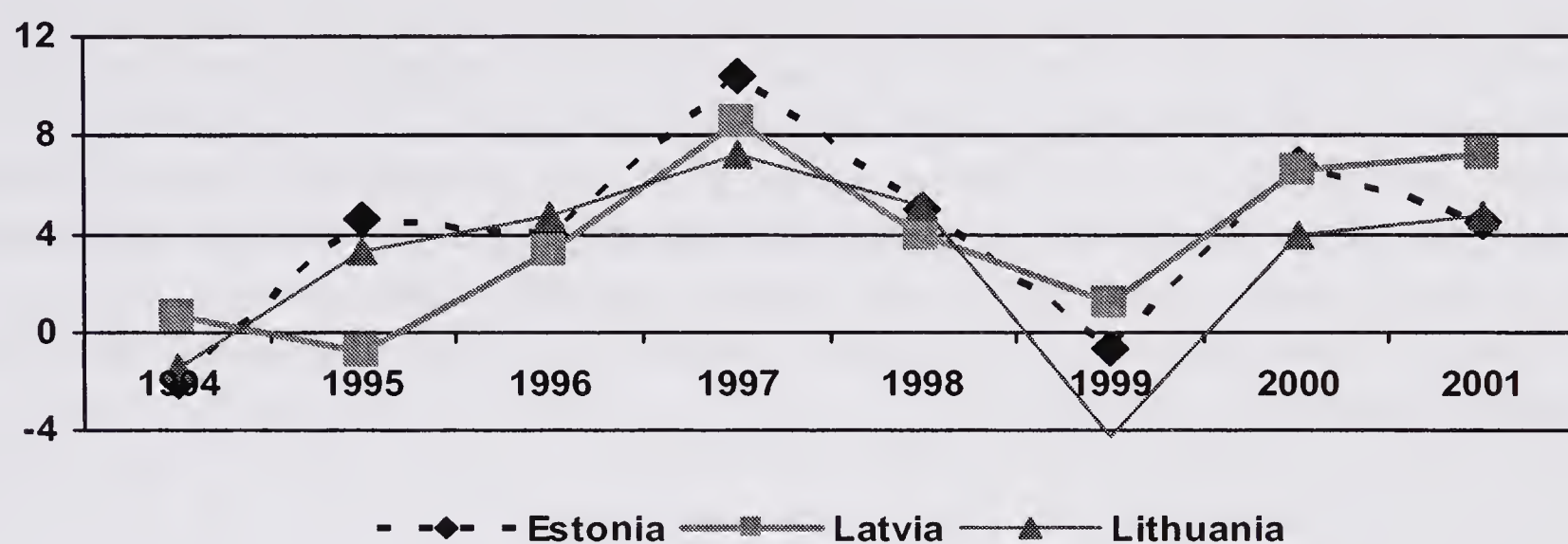
The figure 1 shows that the major setback in growth suffered in 1999 as a consequence of the Russian crisis could only temporarily break the favourable decade-long trend in the Baltics.

² Lithuania has tried to exit its currency board earlier on, but has kept it for credibility reasons. With the consent of the IMF, they have re-pegged the litas to the euro in February.

Table 1. Inflation rates in the Baltics

	1994	1995	1996	1997	1998	1999	2000	2001
Estonia	41.7	28.9	14.8	12.5	6.5	3.9	5.0	4.2
Latvia	26.3	23.1	13.1	7.0	2.8	3.2	1.8	2.6
Lithuania	45.1	35.7	13.1	8.4	2.4	0.3	1.4	2.1

Source: Bank of Estonia, Bank of Latvia, Bank of Lithuania.

Figure 1. Rate of economic growth (1994-2001)

Source: Bank of Estonia, Bank of Latvia, Bank of Lithuania.

One of the most important reasons behind high growth performance of the Baltic States was the successful reorientation of foreign trade. The pick-up in exports beside the gradual recovery in domestic demand has balanced the unfavourable world economic conditions since the second half of 2001. Both Latvia and Estonia scored the highest on the IMF's trade openness index; trade to GDP ratios are over 100% in the region.

All three countries have been running major trade deficits, which are reflected in the current account balance below. The trade deficits, however, are almost always covered by net capital inflows, especially non-debt creating FDI. The current account deficit is decreased by the positive services balance, in Latvia especially through transportation incomes between Russia and the Baltic sea. It follows that the current account deficit is more than covered by FDI, which leads to growing official reserves and the practice that neither the government, nor the monetary authorities borrow from abroad.

Table 2. Current account deficit (in % of GDP)

	1994	1995	1996	1997	1998	1999	2000	2001
Estonia	-7.2	-4.4	-9.2	-12.1	-9.2	-4.7	-6.4	-6.5
Latvia	-0.2	-3.6	-4.2	-6.1	-10.6	-9.6	-6.9	-6.3
Lithuania	-2.1	-10.2	-9.1	-10.2	-12.1	-11.2	-6.0	-6.7

Source: Bank of Estonia, Bank of Latvia, Bank of Lithuania.

Although there is substantial FDI inflow into these countries, unemployment is relatively high (and persistent) compared to other countries in the peer group of pre-accession economies. The main reason behind the high rate of unemployment is that new investments following privatisation are labour-substituting ones (ICEG, 2001). Moreover, FDI is mostly used to enhance existing features and does not take up a new labour force. Another short-term negative impact of growing FDI is the rising import demand from the side of foreign investors, which further increases the gap between trade incomes and expenses.

The combination of a large current account deficit, hard pegs and financial openness is usually regarded as a source of high external vulnerability. In spite of the large foreign deficit, there has been no significant external financial shock or currency crisis in the Baltic region. The indicators for external vulnerability (especially those of Estonia) are favourable, growth and current account deficit look sustainable. In the previous sections I have pointed to some of the most important factors slowing convergence in the typical case of small, open economies and the risks associated with the real and financial openness and the fixed exchange rate regimes.

How can these countries sustain such trade deficits? Sutela (2002) provides three reasons to explain this phenomenon:

1. virtual absence of public debt and fiscal discipline,
2. few and thin asset or debt markets,
3. low degree of monetisation.

5. Specifics of the Baltic economies

The fixed exchange rate regimes maintained in the Baltic already have their own particularities. The correlation between the change in foreign reserves and the reserve money is 0.89, 0.39 and 0.40 respectively, so if the first two regimes are declared currency board arrangements, Latvia can also be considered a quasi currency board³. The arrangements in place are now judged consistent with the ERM-II requirements, so the Baltic States are to enter the Euro directly from their currency boards.

The small size and non-diversified production base of the Baltic countries are consistent with the fixed regimes, but their inflation-proneness and openness to capital flows is a source of risk. The Balassa-Samuelson effect detailed earlier in this paper suggests that pre-accession economies face the problem of real exchange rate (RER) appreciation, which, in the case of fixed exchange rate regimes, puts pressure on inflation. Despite this factor pushing inflation upward, the relatively favourable inflationary trends outlined in the first section are the result of monetary and fiscal discipline and that labour market inflexibility is reflected in the rate of unemployment.

The appreciation of the RER also heightens the risks of speculative attacks. Having a very hard peg does not follow directly that speculative attacks and an exchange crisis

³ The low values also point to the fact that the Baltic arrangements are somewhat different from classical currency boards, where correlation is expected to be 1.00. This can be partly explained by nominal changes in the reserves caused by fluctuations in the anchor exchange rate, and partly by the specifics of these states mentioned below. An important argument made by Sutela (2002) is that from the low correlation value it does not follow that the authorities pursued sterilisation policies – the Baltics had different means in avoiding or if any occurred, overcoming the crises.

are made impossible. Official reserves usually cover a much narrower monetary aggregate than, for instance M2. Given the low degree of monetisation, reflected in the low levels of domestic savings and the total credit/GDP ratio (about half of the market economy benchmark), this type of risk is less relevant. It remains a question to what extent this low degree of monetisation affects growth rates. Another important factor is that Baltic central banks have accumulated reserves backing the money base at well over 100%, which increased the capacity of the Baltic States to survive speculative attacks.

The Estonian currency board has managed to avoid the other often-cited problem of the currency board arrangement: the absence of the central bank's lender of last resort function. Estonia established with its high reserves the Stabilisation Fund, though minor in size, that allows the monetary authority to intervene in case of a liquidity contract. Excess reserves up to 6% of base money were used to provide liquidity support to problem banks during the 1994-5 banking crisis, which was a consequence of the very fast growth of the banking sector not accompanied by a similar development in the banking system supervision. During the Russian crisis in 1998 the central bank of Latvia provided similar financial assistance. In the 1995 banking crisis however, the Bank of Lithuania could not provide sufficient funding for large problem banks and the crisis was resolved through government loan guarantees. The experience further encouraged the central bank, which had initially opposed the currency board, to opt for a more flexible regime that allows for higher monetary autonomy, i.e. LOLR-function, sterilisation, etc. Nevertheless, Lithuania was not able to exit the currency board because of a serious threat to its credibility and pegged its currency to the Euro.

Another important variable of external vulnerability is public and especially foreign debt. As the Baltic States emerged from the Soviet Union in 1991, Russia adopted all foreign assets and liabilities of the USSR, so the Baltics started out without any foreign debt. On the other hand, they were able to regain reserves (gold) that were initially used to back up the currency. The original zero level debt has played a major role in facilitating the running of large foreign deficits without overly loss of credibility, especially given the responsible fiscal stance of Estonia and Latvia shown in the table below.

Table 3. Budget deficit (in % of GDP)

	1994	1995	1996	1997	1998	1999	2000	2001
Estonia	1.3	-1.3	-1.9	2.2	-0.3	-4.7	-0.7	0.0
Latvia	-4.0	-3.9	-1.7	0.1	-0.8	-4.0	-2.8	-1.8
Lithuania	-5.5	-4.5	-4.5	-1.8	-5.8	-8.2	-3.3	-1.4

Source: Bank of Estonia, Bank of Latvia, Bank of Lithuania.

Fiscal prudence in Estonia is more or less guaranteed by the legal constraint that the government cannot propose a budget with deficit. Latvia has also maintained fiscal equilibrium. As a result, both countries external debt is in single digits (that of Lithuania is no more than 17%), which means that one of the key vehicles of currency crises is absent.

The low levels of debt are not merely the result of the Baltic fiscal stance. Sutela (2002) argues that a key factor in the lack of indebtedness is that local debt and equity markets are still quite underdeveloped. The small size of these economies contributes to the smallness of domestic financial markets in the first place. With equity market capitalisation as low as 35% in Estonia, 10% in Latvia and just 5% of GDP in Lithuania, there is very little scope for potentially destabilising short-term inflows. Even more importantly, with the exception of Lithuania running chronic budget deficits, government bonds are virtually non-existent, so there simply are not any assets available.

Stock exchanges went through a boom in late 1996, followed by the extraordinary growth rate of 10.4%, the highest in Europe that year. In the end the cycle came to a bust in late 1997. Interest rates increased so banks started calling back credits and the stock exchange index dropped by 19.4%. At this point, one of the major drawbacks of the CB system manifested itself: the central bank was deprived of its capacity to provide liquidity to ease the liquidity crunch. Given the sound fundamentals, the authorities argued that the unfavourable events were the direct consequences of the fast credit expansion and the large current account deficit and an adequate correction in the macroeconomic variables. In November a stand-by-agreement was signed with the IMF and eventually market confidence was regained and speculative pressures faded. Trading value at the stock exchange declined in 1998 and as a consequence, the index froze and has stagnated since then.

The low levels of public debt, the responsible fiscal stance and the virtually non-existent markets for assets has reduced the risk of speculative attacks and the following capital account crises. The low degree of monetisation on the other hand facilitates the maintaining of a hard peg and acting as a lender of last resort by the central bank. For the time being, these factors reduce the external vulnerability of the Baltics and allow for running large current account deficits necessary for sustainable growth accompanied by financial stability as seen in the previous section. In the long run, however, the absence of a sound financial culture may become an obstacle to further development.

References

- Edwards, S. (2001), 'Capital mobility and economic performance: Are emerging economies different?', *NBER Working Paper*, 8076, January.
- Fischer, S. (2001), 'Exchange Regimes: Is the Bipolar View Correct?', *Finance and development*, Vol. 38, No. 2, June.
- Gáspár, P. (2001), *Real and nominal convergence of pre-accession economies and the choice of exchange rate regimes*, International Centre for Economic Growth (ICEG) and Budapest University of Economics, September, www.icegec.org/Research?ACE/Papers/aceconvergence.pdf.
- Halpern, L., Wyplosz, C. (1998), 'Equilibrium exchange rates in transition economies: Further results', *CEPR Working Paper*.
- ICEG EC, *Macroeconomic analysis and forecast for Eastern Europe 2001-2002*, www.icegec.org
- Sutela, P. (2002), 'Managing capital flows in Estonia and Latvia', *ICEG Working Paper*, No. 8, January.

The Appropriate Exchange Rate System for Integration of the Baltic Countries into the European Monetary Union: The Case of Lithuania, Latvia and Estonia

Katarzyna Wiśniewska

The exchange rate strategy can simplify the accession process to the EU and later entry to the EMU. The position of Latvia, Lithuania, and Estonia regarding the use of the fixed exchange rate is stated in the EMU chapter. In 1999 the EMU chapter was closed for Estonia, in 2000 for Latvia and in 2001 for Lithuania. This means that the candidate countries having closed this chapter have committed themselves, before accession, to abandoning direct public sector financing by the central bank, to eliminating privileged access to the public sector to financial markets and achieving the independence of the central bank. After accession they will make the remaining necessary changes to the central bank legislation as it becomes part of the European Central Bank System, and will start applying the EMU provisions regarding sound public finances, to mention just the two main items.

Upon accession each new member state will adopt the EMU legislation, but will not immediately become a member of the euro zone. The process of adoption of the euro may start, but according to legislation, at least two years will have to elapse before a decision to allow entry into the euro zone can be taken. Initially, each accession country will have the status of a member state with derogation with regard to that particular provision of the EC Treaty.

A more specific question to be clarified concerns the exchange rate aspects relevant for the candidate countries both before and after accession. To clarify the different stages and the requirements to adopt the euro finally, the ECOFIN Council issued in November 2000 a report drawn on a report by the Commission, and the result was endorsed by the Nice European Council in December 2000.

The main conclusions in this report were:

- prior to accession, there are no formal restrictions on the choice of an exchange rate regime;
- upon accession, new member states shall treat their exchange rate policy as a matter of common interest;
- after accession, although not necessarily immediately, accession countries are expected to join the ERM II.

With regard to the last point, it was clarified that floating, crawling pegs and pegs against anchors other than the euro are incompatible with the ERM II. A currency board with the euro as the anchor could, after careful assessment, be considered compatible with the ERM II as a unilateral commitment to fixed euro rate.

During the first stage a candidate country is formally free to choose its exchange rate system. However, even in the first stage the choice should be related to the general macroeconomic stability and a smoother accession to the EMU. It is not a formal or legal requirement, but it follows from the economic argumentation. The EU institutions

retain the power to monitor the evaluation of their progress made in the implementation of pre-accession programmes and through other means of co-ordination of economic policy with the EU. The distinctiveness of this stage is that the EU institutions do not discuss the issue of the exchange rate system as a separate issue of coordination, and it makes up part of the general economic policy. In the subsequent stages the significance of the exchange rate system will increase only to the extent that the exchange rate regime is important with regard to the coordination of institutional requirements.

Respectively, accession to the EU does not distinguish any universal or most acceptable exchange rate system. So, the country is essentially independent in choosing an exchange rate system. However, the EU institutions clearly express their negative opinion regarding an unacceptable instrument – unilateral euroisation as it contradicts the essential logic of the requirements of the Treaty on the introduction of the euro. The EU institutions have stated that “... it should be made clear that any unilateral adoption of the single currency by means of ‘euroisation’ would run counter to the underlying economic reasoning of EMU in the EC Treaty, which foresees the eventual adoption of the euro as the end point of the structured convergence process within a multilateral framework.” (ECOFIN, 2000).

During the second stage, upon accession of the country into the EU, the issue of the exchange rate regime/strategy acquires a different status. It is no longer a derivative of the general economic policy, but an independent element that requires coordination. The new member state will have to treat their exchange rate as a matter of common interest. Upon entry into a new economic space, certain shocks are possible and additional time may be necessary for the economy to reach the balance. Thus, it may be more acceptable for certain countries to allow the amortisation of certain shocks through changes in the exchange rate. This partially explains why it is not obligatory to participate in the ERM II from the date of joining the EU and why the introduction of the euro is conditional on the country's prior participation in this mechanism. This probably reflects the fact that economies are fully capable of adapting to the changes, i.e. amortising shocks through prices instead of the exchange rate. A country has a certain level of freedom in deciding when to join the ERM II.

The third stage is participation in the ERM II. The participation in this mechanism is based on agreed principles that reflect an agreement on the central exchange rate and the margins for its fluctuation. The ERM II was established by the resolution of the European Council on the New Exchange Rate System (signed in June 1997 at the Amsterdam Summit). The main operational features of the exchange rate mechanism are as follows:

- the exchange rate mechanism is based on central rates;
- the standard fluctuation bands is $\pm 15\%$ around the central rates;
- central rates and standard wide bands are set by mutual agreement between the ECB, the ministers of the euro area member states and the ministers and governors of central banks of the non-euro area member states;
- the intervention at the margins will principally be automatic and unlimited;
- closer exchange rate cooperation, possibility by formal agreement regarding bands narrower than the standard ones, will be provided.

Besides, individual countries will be able to attempt to maintain narrower fluctuation bands under unilateral commitment.

After examining the operation principles of the ERM II it is possible to come to the conclusion that a free floating or crawling peg exchange rate system is not possible. The countries that use the currency board system may formally retain their exchange rate within the ERM II. This may be treated as a unilateral obligation of the country to maintain the fixed exchange rate within narrower margins. According to this view, the strategy of the fixed exchange rate system is most acceptable in avoiding additional shocks resulting from alterations of the exchange rate system.

Taking into account the fact that during the second stage the exchange rate is a common issue of coordination, it is not possible to state exactly under what conditions and when the participation in the ERM II will take place. However, joining the ERM II should not be delayed. The participation in the ERM II will lead to the introduction of the euro. Then the country will be a member of the EMU.

The candidate countries have chosen different exchange rates strategies. Some of them adopted a regime of free floating exchange rate and they will enter the ERM II (Poland). Other countries made a commitment to defend a fixed exchange rate by locking into a reserve currency through currency boards. This solution was chosen by the Baltic countries (Latvia, Lithuania, Estonia). They are allowed to retain the fixed exchange rate within the ERM II.

After regaining independence in 1991, the countries initiated market-oriented reforms. The stabilisation and structural reform programmes were aimed at rapid price liberalisation, elimination of subsidies, tightening of finances and establishing a liberal trade and payment system. At an early stage of the adjustment process Latvia, Lithuania and Estonia introduced its own currency. On 20 August 1992 the Estonian kroon became a legal means of payment. In Lithuania and Latvia this process had two stages. There were two legal currencies in circulation. Since 7 May 1992, the Russian rouble and Latvian rouble had been in use together. In Lithuania, the local currency, talonas, was introduced on 1 October 1992 and functioned together with the Russian rouble. Then the Latvian rouble and talonas were freely floated (LB, 2000).

The stabilisation programmes in these countries were based on the exchange rate system. Their monetary policy sought to maintain exchange rate stability and to control the amount of bank reserves so as to limit excessive lending. The exchange rate policy of Estonia since 1992 has been similar to that of a currency board and the monetary base is backed by gold and foreign currency reserves. The Estonian kroon was pegged to the German mark (at the rate 1 DM = 8 EEK).

Latvia has been using the exchange rate-based stabilisation programme since 1993. In March 1993 the Latvian rouble was replaced by lats, the new national currency. The exchange rate was 1 LVL = 200 Roubles. In mid-February 1994, the Bank of Latvia pegged the lats to the SDR basket of currencies (at the rate 1 SDR = 0.7997 LVL) (Kowalewski, 1996).

Also, Lithuania continued the stabilisation reforms. In 1993, the Bank of Lithuania reduced the growth of money supply by applying the reserve requirement and deposit and credit auctions. These instruments have greatly reduced inflation and stabilised the foreign currency exchange rate (on the eve of the introduction of the Litas as the new

national currency). On 25 August 1993 talonas were replaced by the Litas at the rate 1 LTL = 100 talonas. Later, the Bank of Lithuania started to reorient gradually its operations towards the maintenance of a stable Litas exchange rate. Finally, a fixed exchange rate regime was chosen and implemented by means of a currency board arrangement provided for in the Law on the Credibility of the Litas that came into effect on 1 April 1994. The Law requires that the Litas put into circulation be backed fully by the Bank of Lithuania's holdings of convertible foreign exchange reserves and gold. The Litas exchange rate against the US dollar was fixed in April 1994 (1 USD = 4 LTL). In early 2001, the Lithuania government announced that it would repeg its currency, the litas to the euro. It was introduced on 2 February 2002.

The Baltic countries have established one of the most liberal foreign exchange regimes in the world. The residents of these countries and foreigners alike are allowed to open accounts in national currencies and foreign currencies without any restrictions. They can buy and sell national currencies or exchange them for other currencies. To ensure free convertibility of national currencies, the central banks of these countries buy and sell unlimited amounts of the reserve currencies to banks at their request. There are no restrictions, even on capital account transactions. The legislation and policies of these countries ensure free movement of capital to and from these countries. Both foreign currencies and the national currencies can freely enter and leave the country. Foreign investors can repatriate their profits in any currency without restrictions. This is possible because Lithuania, Latvia and Estonia pursued robust foreign exchange policies. They have endured several shocks, both internal and external. In the 1990s many crises occurred in the South East Asian countries and in Russia. Some other countries had to devalue their currency. Latvia, Lithuania and Estonia have always clearly demonstrated their resolve in defending their currencies. Markets always calm down quickly after shocks.

The fixing of the exchange rate, if it is durable and credible, reduces uncertainty, eliminates exchange risk and provides businesses with a sound basis for planning and pricing, thereby fostering investment and international trade relations. A stable exchange rate imposes a constraint on domestic monetary policy (a so-called 'nominal anchor'), which could be regarded as a useful safeguard against unsound financial policies. The expected economic benefits include low inflation, low and stable interest rates and low costs of external borrowing. Some of these benefits can be significant for a small economy, which is closely integrated with, and dependent on a large reserve-currency country. Such benefits may also offset the potential costs of no longer being able to use interest and exchange rates in response to domestic and external shocks, and manage business cycles as well as the loss of sovereignty over printing money. The other danger by such an exchange rate regime as currency board, is loss of competitiveness due to appreciation of the national currency. It can be reduced if prices and wages are flexible and adjust rapidly to misalignments in the real exchange rate. A corollary to this is that the economy needs to be open, so that the impact on trade by changes in the real exchange rate is felt quickly.

The Latvian, Lithuanian and Estonian economies are also open and small. When most goods, including raw materials, are imported, devaluation would not improve competitiveness and could even worsen it. It could even be an obstacle to the increase

of productivity. Capital and intermediate goods are the major part of all imports in these countries. In Lithuania it made up 72% and in Latvia 68% of all imports in 1999.

A fixed exchange rate stimulates inflows of foreign direct investments. Estonia has been a major recipient of foreign direct investment, although the inflow has decreased recently. Foreign direct investments flows (% of GDP) in 1999 were in Estonia 5.9, Latvia 5.2, Lithuania 4.6. The countries are net debtors for long-term capital and net creditors for short-term capital. Among the candidates countries Latvia, Lithuania and Estonia had the lowest inflation in 2000 (1.4% Lithuania, 2.6% Latvia, 4.0% Estonia).

The system of currency board imports low inflation from abroad, thus enhancing price stability.

Table 1. Inflation in Lithuania (in %)

1992	1993	1994	1995	1996	1997	1998	1999	2000
1162.6	188.7	45.1	35.7	13.1	8.4	2.4	0.3	1.4

Source: Bank of Estonia, Bank of Latvia, Bank of Lithuania.

The euro has declined significantly against the dollar since its introduction at the start of 1999. Even though the Litas is fixed to the US dollar, Lithuania has managed to increase the share of its exports to the EU countries. In 2000, the largest share of export 47.8%, was bound for the EU countries. This reflects an increase in exports to the EU countries by 22.04% (export to the CIS countries rose by 13.39%). Imports from the EU amounted to 49.7% of the total imports in 2000 and their level increased by 5.7% (17.34 % in 1999). Imports from the CIS countries were augmented by 43.6% (during 1999, it declined by 20.4%).

The fixed exchange rate as such does not automatically ensure exactly the same inflation rate as that in the country of the base currency. But, in the case of a small country with an open economy, a fixed exchange rate regime can help achieve price stability in the longer-term perspective. Under the fixed exchange rate system, money supply and interest rates in the banking system, as well as inflation, are factors that may not be regulated by the central bank. Interest rates reach a certain equilibrium under the maintained fixed exchange rate. Respectively, under the purchasing power parity (PPP), the rate of inflation approaches the rate of the base country.

Participation in the ERM II would increase confidence and encourage interest convergence even further. Respectively, the country would have a relatively lower interest rate due to the lower country or currency risk premium. In addition, the elimination of uncertainty regarding the future exchange rates helps ensure relative price stability in the long-term. These would achieve compliance with the Maastricht criteria in the long run. Certainly such compliance will not be achieved immediately. However, as it had been mentioned, the beginning is the transitional stage i.e. participation in the ERM II and besides nominal indicators may not be regarded as absolute. If there is a risk that compliance with the exchange rate stability requirement will hamper compliance with the inflation criterion, then the compliance with the inflation criterion may pose the same threat for compliance with the exchange rate stability requirement. At the same time there is no need in stay in the ERM II for too

long, since it may diminish confidence in the country's ability to participate in the ERM II or to utilise fully advantages presented by the single currency.

The essential thing is the necessity of flexibility in the economy. The economy should be able to absorb shocks sufficiently and effectively without necessary changes in the exchange rate. This may be defined as the level of real and nominal convergence reached. Development indicators of the country, and the speed of solving problems during the participation in the ERM II serve as a kind of test to show if the economy is flexible enough for the country's successful participation in the EMU. The Maastricht criteria expressing the nominal convergence are only one part of the indicators of capability of participation in the EMU. Compliance with them partially reflects how close the country is related to the EMU. However, to include entry into the EMU as one of the conditions, or even requirements, regarding the real convergence in reaching the permanent synchronisation of cycles, is not a serious proposition.

Participation in the ERM II, and later in the EMU, essentially means the application of the fixed exchange rate system. If the economies of Lithuania, Latvia, Estonia were able to function successfully under the conditions of the fixed exchange rate, it would not face any significant problems during participation in the EMU as well. Respectively, judging from the result of the development of the economies of Lithuania, Latvia and Estonia and taking into account the roots of the problems, there is no need to pay much attention to instruments that bring short-term benefit.

Lithuania, Latvia and Estonia are transitional economies and are still shaping their economy. This allows for the formation of the nature of the economy in advance, taking into consideration the unavoidable participation in the EMU. Therefore, the ability to operate under the conditions of the fixed exchange rate regime, the appropriateness of the fiscal policy, and especially its coordination in the subsequent stages, becomes the most important points. At the same time, this explains why it could be expedient and useful for Lithuania, Latvia and Estonia to seek participation in the ERM II immediately after accession to the EU, and not to delay participation in the EMU.

Attention has to be paid to two important events that allow more successful utilisation of the strategy chosen. These are the 13 April announcement of the ECB on the compatibility of the currency board arrangements with the ERM II and the report by the (ECOFIN) Council to the European Council in Nice on the exchange rate aspects of enlargement. They narrow the scope of possible speculations regarding the inappropriateness of the currency board when joining the EU and participating in the ERM II. On the whole, it is meaningless to seek a possible ideal way, since in the case of the economy real comparisons are impossible and only certain presumptions can be made. Therefore, in the absence of evident reasons for inappropriateness of the exchange rate system, there is no need for changes. Besides, according to the said report by ECOFIN, "Potential EU members wishing to join ERM II relatively swiftly after accession are already now expected to consider their policies with a view to their prospective membership in ERM II".

Namely, the characteristic features of the economy of a specific country determine the strategy acceptable for the transition period that is needed in order to reach flexibility of the economy in the long-term. The fixed exchange rate strategy is

acceptable to Lithuania, Latvia and Estonia as they are small and open economies. Participation in the ERM II, and later in the EMU, essentially means the application of the fixed exchange rate system. If the economies of Lithuania, Latvia and Estonia were able to function successfully under the conditions of the fixed exchange rate, then there would be no major problems during their participation in the EMU. Stability of the financial sector, the presence of an appropriate fiscal policy and increase of flexibility of the economy become the most important criteria of economic reforms and policy.

These factors influence such priorities of these countries as the strengthening of supervision, the coordination of statistical requirements and the developments of economic research. All this will allow Lithuania, Latvia and Estonia to enter the new stage of more intensive cooperation on the issues of the coordination with the EU economic policy.

References:

- Bratkowski, A., Rostowski, J. (2000), *Unilateral adoption of the euro by EU applicant countries: The macroeconomic aspects*, Paper presented at the sixth Dubrownik economic conference, June, Dubrovnik.
- Coricelli, F. (2000), *Exchange rate arrangements In the transition to the EMU. Some arguments in favour of an early adoption of the euro*, Paper presented at the East-West conference, November.
- ECOFIN (2000), *Report by the Council to the European Council in Nice on the exchange rate aspects of enlargement*, December.
- Jankowiak, J. (2000), 'Rozważmy wprowadzenie systemu currency board', *Gazeta Bankowa*, May.
- Kowalewski, P. (1996), *Polityka kursowa krajów transformacji w Europie Środkowej i Wschodniej w latach 1990-1996*, Instytut Badań nad Gospodarką Rynkową, Warsaw.
- (2000), 'Currency board nie tu i nie teraz', *Gazeta Bankowa*, 14-20 November.
- Kregžde, A. (2001), *Why the fixed exchange rate regime could be an appropriate strategy for integration into the EMU in the case of Lithuania*, paper presented on the conference in Vilnius, 8-9 February.
- LB (2000), *Monetary policy of the Bank of Latvia*, Latvijas Banka, Annual Report, <http://www.bank.lv/izdevumi/English/year/2000/index.html>
- Lutkowski, K. (2000), 'Czy autonomiczna polityka pieniężna rzeczywiście stoi na straconej pozycji', *Bank i Kredyt*, no. 11.
- Oreziak, L. (2000), 'Aktualne i przyszłe kierunki rozwoju obszaru euro', *Bank i Kredyt*, no. 12.

Part 2

The European Union Integration Process and CEE Countries

The Reform of European Union Institutions in the context of Enlargement

Dana Viktorová

1. The current situation of institutional reform

In 1999 the European Council decided to consider the following states as candidates for membership in the European Union: Bulgaria, Cyprus, the Czech Republic, Estonia, Hungary, Latvia, Lithuania, Malta, Poland, Romania, Slovakia and Slovenia.

The process of enlargement brings a challenge for member states, too. Coming enlargement is different not only from the point of view of quality – economic and political situation in candidate countries, which are under the transition process - but also of quantity in a number of applying countries. Smooth procedures depend on the preparedness of the EU also.

The EU cannot accept new members until the substantial reform process of the whole institutional framework takes a part; especially the body of the European Community, concerned with the system of institutions such as the Council of the EU, the European Commission, the European Parliament, the European Court of Justice, etc. and legal rules. These institutions have certain negotiation and decision making rules.

The system was prepared for the European Economic Community consisting of six or nine members. In connection with the increasing number of member states, modifications were made, but there was no substantial change over.

Institutional changes, including the decision making mechanism, are adherent to enlargement. Extension of the current system would lead to its collapse. This system is not able to display heterogeneity of economic development and different interests among member states and candidates. The political system of today's EU cannot imbibe such a heterogeneity and diversity in a larger Europe.

The decision-making mechanism already faces certain problems. Different interests of an increasing number of members of the decision-making process are difficult to treat by unanimous, or even by qualified majority voting, which stipulates a majority of 70%.

It is obvious, that principal institutional reform is an essential requirement for adopting candidate countries. This reform has to be considered from the point of view of the future, when the EU's 27 member states, will operate.

Even the huge number of the EU member states causes problems in efficient institutional proceedings (Šrein, 1999):

- Their decision-making substantiality is closed because of the large number of members. The founding six member states could have found compromise much easier than the 27 members would.
- Almost all of the candidates are small states, and there is a danger of originating an institutional imbalance between small and large member states.

2. The European Commission

Today the European Commission has 20 commissioners. The largest countries, the United Kingdom, France, Germany, Italy and Spain have two commissioners. If this allocation is maintained during the first round of enlargement, involving Poland, Hungary, Slovenia, the Czech Republic, Estonia, Cyprus and Malta; Poland would qualify for two commissioners and the others for one. That would establish the Commission of 28 commissioners. And further enlargement, involving the rest of the candidates, would set the Commission at 33 commissioners, which is a big number for the Commission's tasks.

The Treaty of Nice Protocol on the Enlargement of the European Union proposes that while the first round of enlargement of the EU comes into force, each country would delegate just one commissioner. Suddenly, there would be a changed proportion of weighted votes in the Council on behalf of those countries, that do not nominate its second commissioner.

After further enlargement of the Union, to 27 members, Article 231(1) of the Treaty establishing the European Community must be altered as follows. A number of members of the Commission should be lower than the number of member states. Members of the Commission should be assembled according to the rotational equality principle, which should be endorsed by a unanimous vote of the Council. The number of members of the Commission should be determined by unanimous vote of the Council. This modification would stand from the first day, when the Commission undertakes its incumbencies with the twenty seventh member state. With further enlargement, the maximum number of commissioners must be retained.

There are many suggestions as to how the Commission should be organised. One of these is to establish a constricted College of Commissioners with a special liability, supported by commissioners without position. The constricted College of Commissioners would endorse a proposal by single majority to relegate it to the full College of Commissioners to endorse it by qualified majority.

Even though the commissioners are not delegated to represent their country, but to serve EU interests, the member states are not willing to lose their representative in the Commission; if this two-stage College of Commissioners system were introduced.

Enforcing the principles of expertise and independency of the commissioners is the only solution. The president of the Commission would be the key figure, forming a team of commissioners. The Council and the Parliament would approve the Commission (Šrein, 1999). The President of the Commission would make up the team without limitation of national personal quotas.

The process of enlargement brings many pragmatic embarrassments for the internal working procedures of the Commission. If the one-stage Commission were sustained, it would be difficult to find a sufficient number of directorate-generals while the number of commissioners increases. And an increase in the number of directorates generals would increase a growth in activities. Although there would not be enough comparable posts for each of the representatives, it would lead to first-rate and low-rate commissioners. Such a situation might establish a Commission hierarchy.

Enlargement will bring the need to engage employees from new member states and absorbing a relatively large number of new countries will be difficult, particularly if

those employees have no experience of the workings of EU matters and totally different administrative habits and traditions.

3. The Council of the EU

According to Article 205 (ex Article 148) of the Amsterdam Treaty, each member state has votes allocated from 10 for large countries to two for the smallest ones in the Council.

In the case of qualified majority voting, the weighted votes system is used. In this system, the large countries have more votes but not proportionally according to the population. Smaller countries have more votes than they should get according to their population. From the total number of 87 votes, there are 62 needed to pass a proposal as a qualified majority voting, 26 of them as a blocking minority.

If today's decision-making process is maintained, with the same weighted votes system, the small countries would entirely dominate the Council of the EU composed of 27 members. This is because those principles were originally structured for the integrated unit of six member states – three large and three small. And it is not possible to copy such system to the EU of 27 members, where just four member states are large ones (the United Kingdom, Germany, France, Italy), three of them medium-sized (Spain, Poland, Romania) and 20 small ones.

Scenarios for the EU of 27 member states, which studied situations that could occur if the votes in the Council were allocated according to today's system, gave the advantage to small countries (see table 1).

According to this scenario, small countries voting together with one large country and two medium-sized countries would create a blocking minority with a population involving just half of the whole EU. An association of Malta, Cyprus, Estonia, Latvia and Slovakia would count 11 votes in the Council representing 7.3 million of population whilst Germany's 10 votes would represent 80 million of people.

Small countries representing 12% of the population could also create a blocking minority, which is not reasonable for large countries either. In fact, we should admit, that there is no alliance of small countries against large ones existing in reality.

Let us take the case of the EU extended by seven new countries such as the Czech Republic, Estonia, Cyprus, Hungary, Poland, Slovenia and Malta. In this EU of 22 members, the states of the integration core¹ would gain 32 votes and four large countries (France, Italy, Germany, United Kingdom) – 30 votes altogether. This would not be enough to create a blocking minority, because in the EU of 22 states, creating a blocking minority requires 34 votes. Creating a qualified majority, 56 votes in the Council, is absolutely impossible for all large and medium-sized countries, which actually represent 77% of the population. The reform of weighted voting in the decision making process would be needed, as new small countries, involving 5.7% of the population, will gain 14.9% of votes in the Council (Jakš, 1999). Creating a majority convenient for large countries or reform on behalf of large countries, would be precluded.

¹ Constituent member states – Belgium, France, Italy, Luxembourg, Germany, the Netherlands.

Table 1. Weighted votes in the Council of the EU-27

Current members	Population (millions)	Weighted votes
France	58.0	10
Italy	57.3	10
Germany	81.5	10
United Kingdom	58.5	10
Spain	39.2	8
Belgium	10.1	5
Holland	15.4	5
Portugal	9.9	5
Greece	10.4	5
Austria	8.0	4
Sweden	8.8	4
Denmark	5.2	3
Finland	5.1	3
Ireland	3.6	3
Luxembourg	0.4	2
Incoming members		
Bulgaria	9.0	4
Czech Republic	10.3	5
Estonia	1.5	2
Cyprus	0.7	2
Lithuania	3.7	3
Latvia	2.6	2
Hungary	10.3	5
Malta	0.3	2
Poland	38.3	8
Romania	22.8	7
Slovakia	5.3	3
Slovenia	2.0	3
Total	478.2	134
Qualified majority		95
Blocking minority		40

Source: Miller (1999).

On 1 January 2005, Article 205(2) and (4) of the treaty establishing the EC will be changed. If the Council needs to make a decision by a qualified majority voting, the votes of member states should be reweighed in the manner shown in Table 2. The total number of votes in the Council will be 237. A qualified majority required to pass a proposal will be 170 votes. If 12 new members join the EU, the weighted votes system will not change and the votes to new countries would be allocated as follows in table 2. A qualified majority required to pass a proposal will then be 258 votes.

Table 2. Weighted votes in the Council, EU-27

Germany	29	Bulgaria	10
United Kingdom	29	Austria	10
France	29	Slovakia	7
Italy	29	Denmark	7
Spain	27	Finland	7
Poland	27	Ireland	7
Romania	14	Lithuania	7
Holland	13	Latvia	4
Greece	12	Slovenia	4
Belgium	12	Estonia	4
Portugal	12	Cyprus	4
Czech Republic	12	Luxembourg	4
Hungary	12	Malta	3
Sweden	10	Total	345

Source: EC (2001).

So far, the reweighing of votes has been the most important change made. The aim was to adjust particularity to today's decision-making system. After all, the basic principle has been maintained. Three large countries and one small country would be able to block any majority.

For the first time, there would be a chance for each member state to protest against a decision of the Council, which does not represent at least 62% of the population of the EU.

Of course, it is not possible to establish a decision-making system, which would be totally proportional to a number of populations of each member state. The sovereignty status of the country has to be taken in to the size of the country. But, if the small countries maintained broad disproportions in weighted votes and in to the EU new countries came, those broad disproportions would increase even more. The difference between the percentage of votes needed for a qualified majority and percentage of European population representing these votes would become immoderate.

Without any reform, the EU of 27 members might become a unit, where the countries with a minor rate would outvote countries with major rate of European population. And that would disclaim the democratic justification of the Council.

Another alternative is to set up a two level system, where the size of population would be entirely accounted for. The indicator of qualified majority would include an explicit percentage of all votes and those votes representing an explicit percentage of the population.

3.1 Extension of qualified majority voting

As the process of enlargement progresses, and the number of member states widely increases, it will be more and more difficult to achieve a unanimous decision. The extension of qualified majority voting could simplify the decision-making process. And the qualified majority voting is a standard for a major part of European legislation.

It should be closely revised whether the qualified majority voting ought to be extended on behalf of efficient decision making while enlarging the EU.

Nowadays, there are 73 Articles and sub-articles in the main Treaties, which need to be carried by a unanimous vote. Obviously, there would still be some areas, which have to be carried by a unanimous vote, such as modification of the Treaties and enlargement of the EU. But, it should be considered, whether the unanimous vote is not a potential barrier for further and deeper integration.

The member countries and the European Parliament agree that the extension of qualified majority voting is essential, if the EU wants to operate efficiently with 20 or 30 members. But such an extension can be a challenge for sovereign states. The unanimous voting system cannot be abolished, because it is an aspect of equality.

3.2 The presidency of the Council

The system of the presidency in the Council requires a revision too. Today's half-a-year rotation procedure would be very difficult to manage in the EU of 27 members. Each state would reach a presidency once in 13.5 years. It means that a certain politicians cannot actually experience this post. Such a system has another handicap for the efficient work of the Council, because the period of the presidency is too short.

There are many solutions. For example, enlarging the presidency period up to one or two years with the election. So the new members would be spared from the mistakes coming from their lack of experience with the presidency. In that case, they would not be ready for it.

4. The European Parliament

It has been necessary to reallocate the number of seats in the Parliament in the context of the enlargement. Otherwise the Parliament would become ungovernable and ineffective. The aim is to establish a Parliament that would be similar to the House of Commons in the United Kingdom or to the Bundestag in Germany. In the Amsterdam Treaty, some changes were made to the structure, functions and competences of the Parliament to create suitable conditions for the enlargement of the EU.

The ratio between the smallest, Luxemburg, and the largest, Germany, in terms of population, is 1:205. Hereafter, it is not possible to provide even an estimate of a fair proportional representation in the Parliament. Today's situation is the ratio 1:19.

The Parliament nowadays has 626 members, who are directly elected in member states. The number of the seats is determined according to the size of the country and is more favourable for small countries. A number of the representatives from each country are resolutely set in the Article 190(2) of the Amsterdam Treaty.

European politicians have observed a danger, that the Parliament was going to face. While enlarging the EU, the Parliament would become monstrous. If today's quotas of numbers of members were applied, the Parliament would extend to more than 1,000 seats. And that would, of course, not allow it to operate. It was a necessity to solve the following problems (Šrein, 1999):

- a maximum number of the representatives,

- use of a proportional system – the same number of voters for one mandate in a large and small country,
- use of the minority prevention system,
- implementation of one or more mandate election districts overlapping national borders, where the European parties would be candidates.

Article 189 of the Amsterdam Treaty states that a number of members of the Parliament will not exceed 700 seats. This limit means that on-coming enlargement will require the reallocation of the seats of today's members. According to the Treaty of Nice, a number of representatives should not exceed a margin of 732 representatives. The principle of mandates for particular countries has had to be reappraised, so even the smallest country would occupy at least two or three seats.

Table 3. Number of sits in the European Parliament, EU-27

Germany	99	Bulgaria	17
United Kingdom	72	Austria	17
France	72	Slovakia	13
Italy	72	Denmark	13
Spain	50	Finland	13
Poland	50	Ireland	12
Romania	33	Lithuania	12
Holland	25	Latvia	8
Greece	22	Slovenia	7
Belgium	22	Estonia	6
Portugal	22	Cyprus	6
Czech Republic	20	Luxemburg	6
Hungary	20	Malta	5
Sweden	18	Total	732

Source: EC (2001).

On 1 January 2004, the first sub-paragraph of Article 190(2) of Treaty establishing the EC ought to be changed. The number of the representatives in the Parliament in the EU of 27 member states will appear as follows in table 3.

5. Conclusions

At least a year before the sixth candidate joins the EU; the intergovernmental conference must determine deeper reforms. They are very important before further enlargement; otherwise the whole system would collapse. In contrast to the last enlargement processes, the new enlargement would cut down the operational ability and manageability of the EU.

The EU takes an interest in its enlargement, but this effort is threatened by incomplete institutional reform.

The preparedness of the European institutions will decide about further development in Central and Eastern Europe. Enlargement must not weaken the EU.

The EU has to be prepared for a community of a large number of member states and must succeed in achieving common European goals.

The institutional reform should be finished in 2005 and we can examine whether it has brought the required effects or not. This also will be a year when the EU is able to accept the new members.

The EU ought to establish such a system that does not require quota's changes whenever new members are going to join it.

If the EU wants to operate effectively, efficiently and responsible, it must have institutions, which work effectively, efficiently and responsible.

References:

- Borchardt, K-D. (2000), *The ABC of Community Law*, European Documentation. *The Commission's Programme for 1999 - Bulletin of the European Union*, Supplement No. 1/1999.
- Daley, S. (2000), 'European Union Reform: After 5 Days, a Yawn (News Analysis)', *New York Times*, 12 December 2000.
- 'Dialog o Evropě. Výzvy pro institucionální reformu', *Informace z Evropy, Řada A, Evropská unie*, No. 2(73)/2000.
- EC (2001), *Treaty of Nice, Provisional text approved by the Intergovernmental Conference on institutional reform*, The European Commission, Brussels, <http://ue.eu.int/cigdos/en/cig2000-EN.pdf>.
- 'Europe: The Challenge Awaiting Romano Prodi', *The Economist*, 3 April 1999.
- Europe's Agenda 2000, Strengthening and widening the European Union*, <http://europa.eu.int/comm/agenda2000/public%5Fen.pdf>.
- Greger, P. (1997), 'Dosažené výsledky reformy Evropské unie ve světle amsterodamského summitu', *Mezinárodní vztahy*, No. 3.
- Had, M., Urban, L., (2000), *Evropská společenství - První pilíř Evropské unie*, Ústav mezinárodních vztahů, Prague.
- IGC: Reform for Enlargement / The British Approach to the European Union Intergovernmental Conference 2000, <http://files.fco.gov.uk/eudi/igs.pdf>.
- Institutional reform*, www.knoweurope.net.
- Institutional reform: Commission presents guidelines for its internal operation in an enlarged Union*, www.knoweurope.net.
- Jakš, J. (1994), 'Vnitřní reforma je nutná', *Ekonom*, No. 42.
- (1996), 'Bude reforma dostačující?', *Ekonom*, No. 39.
- (1999), *Spory o institucionální reformu EU a šance východního rozšíření - Na okraj kulatého stolu pořádaného*, Friedrich-Ebert-Stiftung, 21 October, Prague.
- 'Journey into the unknown', *Financial Times*, No. 33751, 9 November 1998.
- Klíma, M. (1998), 'Amsterodamská smlouva - institucionální reforma a inovace', *Mezinárodní vztahy*, No. 1.
- Knoblochová, V. (1999), 'Amsterodamská smlouva', *Mezinárodní vztahy*, No. 1.
- Miller, V. (1999), 'Institutional Reform in the European Union', *Research Paper* 99/54, www.parliament.uk/commons/lib/research/rp99/rp99-054.pdf.
- 'Program nové Evropské komise na rok 2000', *Informace z Evropy, Řada A - Evropská unie*, No. 2(73)/2000.
- Prospects brighten for deal on treaty reform*, <http://www.knoweurope.net>.
- Šrein, Z. (1999), *Mechanismy hospodářské politiky Evropské unie*, VŠE Praha, 1999.
- Zahradník, P. (1998), 'Výhled evropské integrace pro nejbližší období', *Financial Review*, No. 9.

The Evolution of the European Social Fund as an Instrument supporting the Fight against Unemployment in the European Union

Dominik Sobczak

Introduction

In this article I would like to present the evolution of the earliest created Structural Fund of the European Communities, the European Social Fund (ESF). I will show in what conditions and economic situation it started operating, and how it was being transformed as the Community was being enlarged, and new problems considering human resources were appearing. At the end of my work I will present the current framework of the ESF, the framework Poland and other CEE countries will be subjected to when we are admitted to the EU.

1. Establishment and the initial phase (1957–1971) of ESF

The European Social Fund (ESF), established by article 123 of the Treaty of Rome in 1957, is the earliest of all four structural fund created by the European Union. As in the early years of the ESF operation, unemployment was not a serious problem in the Community, and it was expected to be solved by economic growth and supporting training and mobility of workers. Therefore the aims of the ESF concentrated on improving job opportunities in the European Community by promoting employment and increasing the geographical and occupational mobility of workers. To achieve this, the original rules, set in article 125 of the Treaty, provided for grants reimbursing public authorities in the Member States half the cost of vocational training, allowances and grants to workers suffering a temporary drop in wages during restructuring operations in their enterprises, and assistance to workers moving from one region to another in search of work and those needing to acquire new skills in sectors undergoing modernisation or conversion of production methods.

ESF started its regular operation in 1960, and until 1974 it assisted the retraining of almost one million workers and resettlement of about 700,000. In terms of numbers assisted, Italy was the main beneficiary with 65% of the total, followed by Germany with 25.5%, and in terms of the total value of grants, Germany was the major beneficiary with 42%, followed by Italy with 36%. The aid was financed by direct contributions from the member states. This, however, proved to be the main weakness of the ESF, as it was supposed to have a redistributive role, with the poorest countries (Italy) being the biggest beneficiaries, and the richest countries contributing relatively more. In fact this was true in the first few years, but from 1967 onwards the most prosperous member state, Germany, became the major beneficiary. The other main problem to become apparent during the lifetime of the first ESF was the fact that the

system of retrospective grants precluded any Community influence on the national labour market and vocational training policies (EC, 1998).

2. The European Social Fund reform in 1971

In the second half of the 1960s there was a growing realisation in the Community that earlier ideas about counteracting unemployment proved inefficient, and that part of the unemployment problem was caused by the community policy. Moreover, it was also becoming evident that, in some regions, employment was hampered by structural factors. Due to this, in 1969 the European Commission presented its first proposals of the ESF reform. Its main aims concentrated on transforming the Fund into a broader, more efficient and more flexible instrument, which would respond to Community, rather than national, objectives. The ESF, which emerged in 1972, had much greater resources, which exceeded in its first two years the total budget for the first twelve years of the ESF operation. On top of this, the whole procedure of applying for grants was changed, as now forms were to be submitted prior to the beginning of operations, replacing the previous retroactive system.

There was also a considerable change in areas of support, as for the first time, the private sector became eligible for ESF grants, as long as a public authority guaranteeing the scheme was also contributing. However, the main hitherto aims of ESF remained unchanged, as there was continual support for training and re-settlement of workers, together with allowances for the training of instructors and trainees. New rules also provided for wage subsidies in less developed regions for workers being trained during their first six months of employment, and similar grants were accessible to workers over 50 and for the adaptation of work stations to the needs of people with disabilities. In practice, most of the resources (about 90%) still went to vocational training (EC, 1998).

3. Amendments of the late 1970s

Due to a considerable deterioration in the unemployment situation in the European Community in the second half of the decade, (the unemployment rate rose from about 2% at the beginning of the 1960s to almost 5% at the end of the 1970s), especially among young people, the Commission broadened areas of the ESF support to migrant workers, unemployed women over 25 years of age, especially those wishing to return to work after a longer period out of the labour market, and unemployed young people below 25 years of age, especially seeking their first job. Moreover, due to increasing regional disparities in the European Community, the ESF support for regional development was also significantly enlarged (EC, 1998).

4. The 1983 revision of the European Social Fund

At the beginning of the 1980s the unemployment rate was growing constantly, rising to 7.8% in 1981, 9.3% in 1982, and 10.3% in 1983 (CEC, 1996, p. 21). To a large extent this situation affected young people, many of who lacked basic schooling and training,

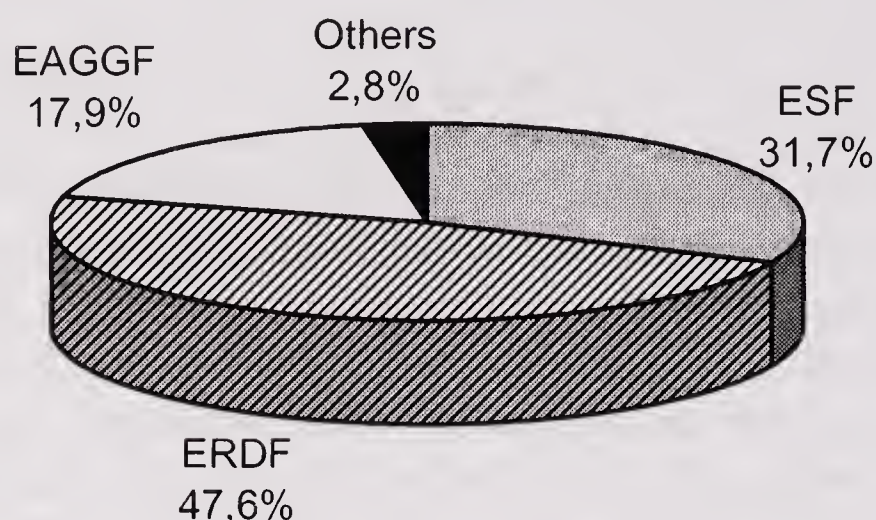
which would allow them to find a job. Additionally, the acquired qualifications were usually ill-adapted to the needs of the job market. Facing all these problems, Member States were preparing new education schemes to adapt these people to the demand of the labour market, which resulted in higher expectations of help from the ESF.

Responding to this, the Commission proposed a new scheme for the Fund, a scheme, which would concentrate on the fight against youth unemployment. An objective was set to provide support which would guarantee training for all young people in need, stipulating that young people should make up at least 75% of all beneficiaries of the Fund. Laying out specific guidelines, the Commission gave priority to vocational training for young people with inadequate qualifications for jobs involving new technologies, and to schemes for secondary school students combining vocational training and work experience. The ESF support for regional development was also stressed, which resulted in the increase of help in regions struck by industrial restructuring and a high level of long-term unemployment. As a result of these changes, nearly 42% of the ESF budget was allocated to projects in the absolute priority regions and only little more than 10% went to wealthy regions. Due to this reform some new areas of support have also been added, with grants for training aimed at modernisation of small and medium-sized enterprises (SMEs) as the main one. Additional support was also given to innovatory actions to combat unemployment, training of instructors, and organising expert guidance (EC, 1998).

5. Drawbacks of the European Social Fund and its reform of 1988

With the continuous rise of the unemployment rate, budgetary resources, though reaching ECU 237 million in 1986 compared to ECU 155.6 million in 1982, remained seriously inadequate to fulfil all the needs in the priority areas. Serious problems were also arising with managing the Fund, as the total number of applications was rapidly increasing, and the system required individual processing of thousands of payment applications. Moreover, due to an increasing tendency that local planning, a bottom-up approach, could lead to more effective use of funds, numerous voices were heard saying that the whole ESF managing system should be reconsidered, because it was outdated, and the single project approach should be replaced by integrated programming of ESF assistance (EC, 1998).

The problems listed above did not only refer to the ESF, but also to all other structural funds, aimed at improving the operation of the whole structural policy. In 1988 the European Community adopted a radical reform of all structural funds. Its main effect entailed reshaping all structural funds, working hitherto in isolation, into an integrated system of support aimed at working together towards the goal of economic and social cohesion in the European Community. The EFS itself played an important role in the system which emerged, as its allocation of 20 billion ECU for the period 1989-1993 was second largest behind the European Regional Development Fund, and made up 31.7% of the total structural funds allocation.

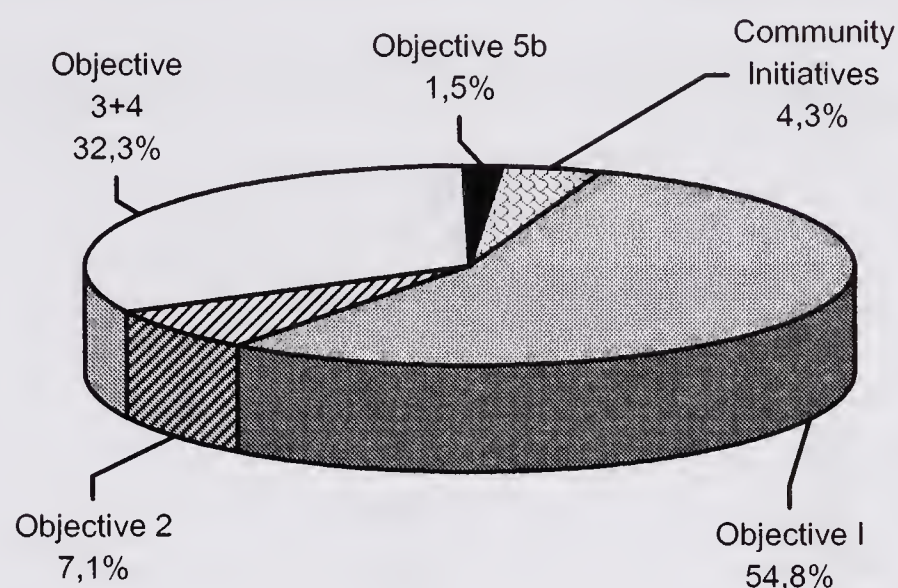
Figure 1. Breakdown of structural fund allocations (1989-1993)

Note: ESF – 20bn, ERDF – 30.1bn, EAGGF – 11.3bn, Others – 1.8bn, Total – 63.2bn (all numbers in ECU)

Source: EC (1998).

The new approach was built on four basic principles – concentration, partnership, programming and additionality. *Concentration* meant setting out five objectives to be achieved collectively by all funds. The ESF was the only one to finance combating long-term unemployment (Objective 3) and ensuring a decent start for young people in working life (Objective 4). Moreover, the ESF was also involved in regional objectives (1, 2, and 5b) with the aim of ensuring the development of human resources needed to maximise the investment in regional and rural development financed by other structural funds. *Partnership* was realised during the process of setting priority areas of support, as all member states prepared analyses of their situation together with regional development plans, and a discussion involving the Commission and national authorities was held, resulting in the creation of the Community Support Framework. *Programming*, on the other hand, meant setting these priority areas of support for the whole period of 1989-93, which could not be subjected to change. The sense of it was to ensure continuous assistance in priority areas of support in order to maximise the effectiveness of structural policy expenditures. Finally, the *additionality* principle required that resources from structural funds did not simply replace national assistance in the member states, but contributed to the increase of the total support for priority areas in the European Community.

As a result of this reform, the scope of the ESF was also significantly increased. For the first time it covered training for public servants, but only in subjects relevant to structural funds. Moreover, it involved the broadening of eligibility for the ESF support in the underdeveloped regions, as it also included people threatened with unemployment. In 1992 recruitment subsidies were phased out, except for self employment. As in the past, vocational training was still strongly supported, and included both, trainees and instructors. One of the innovations in ESF included technical assistance in preparation and execution of projects supported from the ESF. Finally, social dialogue also became eligible, as long as it involved the exchange of knowledge and experience between workers in different member states.

Figure 2. ESF funding per objective and community initiatives (1989-1993)

Source: EC (1998).

From the technical point of view also much has changed, as decisions on project applications were no longer at the Community level, but usually at national or even regional level. A new payment system was also designed, aiming at reducing previous delays and cash flow problems. The main change involved releasing 50% of the payment at the beginning of the project, and a further 30% at halfway.

The 1988 reform of the Structural Funds also involved setting up several Community Initiatives, which constitute an instrument designed to strengthen the Community dimension of the operation of the Structural Funds, aimed at tackling specific problems. Three of them were chiefly financed by the ESF: EUROFORM (ECU 300 million) which was aimed at developing new qualifications and employment opportunities for the single market; NOW (ECU 156 million) which was concerned with promoting equality of opportunity for women on the labour market and HORIZON (ECU 304 million) targeted at improving job prospects for people with disabilities or at risk of exclusion from employment for other reasons. The ESF also contributed in the period of 1989-93 around ECU 125 million to the development of human resources in several other Community Initiatives (EC, 1998).

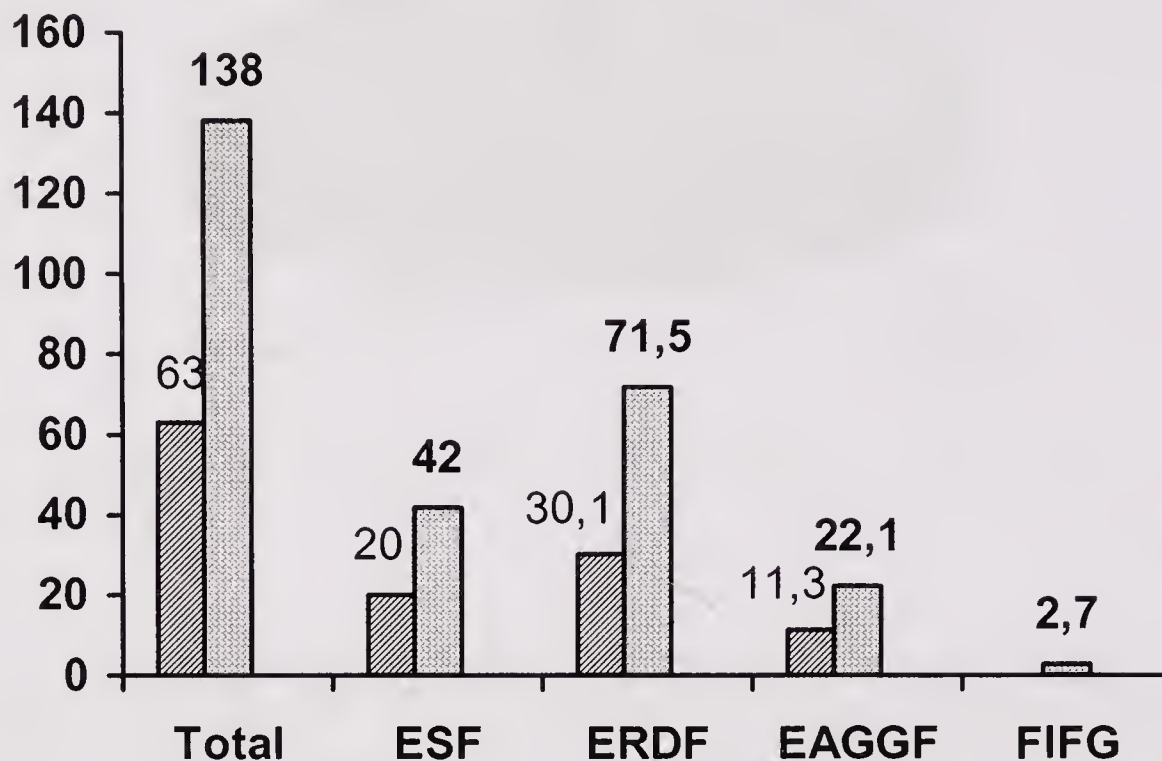
6. Further growth of the European Social Fund in the 1994-99 period

Following the provisions of the Maastricht Treaty, which put greater pressure on economic and social cohesion due to increasing unemployment (from 8.2% in 1991 to 10.7% in 1993, according to OOPEC, 2000, p. 147), rising disparities between different regions, and moves towards establishing the Economic and Monetary Union, the European Council in Edinburgh in December 1992 decided on considerable increases in budgets of all structural funds. In fact, the resources assigned for the period 1993-99 doubled the resources for the previous period.

As the next chart shows, ESF was not an exemption, as its budget was increased from ECU 20 billion for the period 1989-1993 to ECU 42 billion in 1994-1999. Due to problems with unemployment, the European Council in December 1993 in Brussels

adopted solutions proposed by the Commission in *The White Paper on Growth, Competitiveness and Employment*.

Figure 3. Comparison of structural fund allocation for periods 1989-93 and 1994-99

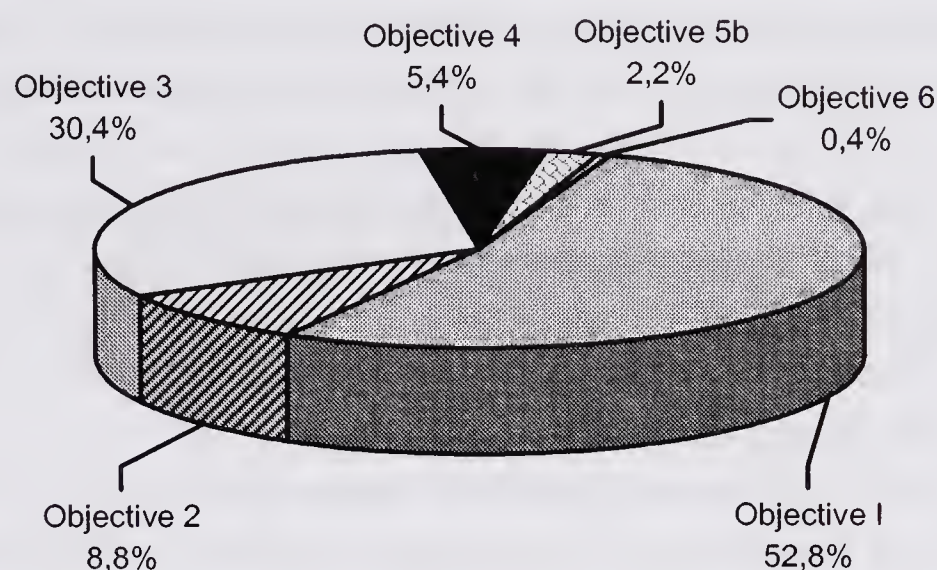


Source: EC (1997), p. 154/155.

These proposals called for a significant increase in investment in human capital and greater and more effective efforts in vocational training, especially in reference to increasing skill levels, mainly in the new technologies, and promoting life-long learning.

Youth unemployment remained a chief concern, and support was expanded on education and initial training to develop entrepreneurial spirit, which would contribute to larger self-employment among young people. As in the previous programming period, long-term unemployment was recognised as a grave problem, and even greater emphasis was put on equality of men and women in the labour market. Moreover, due to the increasing problem of social exclusion, it was given much greater consideration in the new programming period. Additionally, the importance of preventive measures in combating unemployment was recognised, which stipulated assigning significant resources for actions in this area. As in the previous period, there was continuous ESF support for innovative projects in training techniques and for projects implemented in the context of the Social Dialogue. The figure 4 presents a breakdown of the whole ESF support into different categories.

Based on lessons from the previous period, Objectives of Structural Funds were slightly redefined. This referred also to ESF, as the previous Objectives 3 and 4 were combined into new Objective 3 – combating long-term unemployment and integrating young people into working life. The new Objective 4 was designed to provide support for workers at risk of unemployment due to changing industrial structure throughout the European Union.

Figure 4. ESF Funding per Objective and Community Initiatives (1994–1999)

Source: EC (1998, Ch. 3 – The 1993 review).

ESF, as in the previous period, also participated in financing human resources components in projects under all other Objectives, including a newly set, especially for new Scandinavian members, Objective 6. These alterations naturally also caused a change in allocation of ESF assistance to different Objectives (see table 1).

As we can see on the chart below, in the period 1994-99 ESF, as in the previous period, also supported several Community Initiatives. Although there was an ESF component in most initiatives, it was dominant in EMPLOYMENT and ADAPT. The EMPLOYMENT Initiative consisted of three components, the first two of which were drawn from the original NOW and HORIZON Initiatives.

Table 1. ESF allocations in different areas of support (1994–99)

Integration of young job-seekers	20.2%
Support for employment, growth and stability	19.0%
Integration of long-term unemployed	18.8%
Improvement of education and training systems	12.2%
Integration of people at risk of exclusion	10.8%
Adaptation to industrial change	9.9%
Technical assistance	3.1%
Promotion of equal opportunities	3.1%
Boosting human potential in research, science and technology	2.4%
Training of public officials	0.5%

Source: EC (1996).

These three components are:

- Now – promotion of equal opportunities for men and women,
- Horizon – supporting employment of people with disabilities and other threatened with exclusion,
- Youthstart – integrating young people without adequate training or qualifications into the labour market.

The new ADAPT Initiative was built on the experience of EUROTECHNET and EUROFORM and was designed to assist in the preparation of workers for industrial change, with the emphasis on building an information society.

This review of the Structural Funds brought also some changes to the technical side of the ESF operation. As far as *Programming* is concerned, administrative procedures were simplified, which sped up the transfer of allocated resources. Greater emphasis was placed on assessment and monitoring of the realised projects in order to ensure greater efficiency of the given support. An ex post obligatory evaluation of each project was also foreseen as the best means to monitor the effects of each project, and to draw lessons for the future.

In this period the ESF also played a very important role in supporting the implementation of the European Employment Strategy, accepted by the European Council in Essen in December 1994 (EC, 1998).

7. Provisions of the ESF Congress in 1998

The ESF Congress was held in Birmingham on 26-28 May 1998. It was the first such event in the ESF history and it focused on the general theme “investing in people”. The Congress had two objectives. First, to assess the hitherto achievements of ESF, and second, to discuss the future policy framework of ESF. The Congress consisted of six workshops, corresponding to major problems connected with human resources development nowadays. These were as follows:

- Workshop 1 – Long-term unemployment
Supporting Member States’ efforts to combat long-term unemployment was confirmed to be one of the most important roles of ESF. Moreover, the discussions revealed, that hitherto concentration of assistance on vocational training proves inadequate, and these measures should be supported by personal guidance and counselling schemes.
- Workshop 2 – Young people
This workshop focused on ways of improving the current ESF practices in helping young people into employment. During discussions a major drawback of ESF was noticed, as its actions were hampered by lack of a cohesive youth policy, which led to the situation that there were no programmes designed exclusively for the young. An urgent need for such programmes was emphasised, as the young are faced by tremendous challenges connected with a rapidly changing labour market, which causes marginalisation of those poorer living in the modern society.
- Workshop 3 – Exclusion from the labour market
It was agreed, that ESF recognises quite well different groups threatened with exclusion, but it has problems with reaching particular people in need. In order to improve this, ESF should cooperate more with NGOs, which are closer to the said groups. It was also emphasised, that considerable ESF support should be continued, as it requires a lot of effort to bring the socially excluded people back to normal life.
- Workshop 4 – Equal opportunities

This workshop concentrated on the problem of equal opportunities for men and women in the labour market, as there are still considerable disparities in this area. It was concluded, that ESF should continue to provide assistance in introducing women into the labour market, but it should do so with greater recognition of women's needs and expectations.

- Workshop 5 – Adaptation to industrial change

Discussions during this workshop concentrated on how ESF can help to match the demand for skills in the contemporary labour market with appropriate training. It was stressed that the track of concentrating on preventive measures should be continued, because it so far gave very good results, however, there is still a strong need to improve the anticipation of labour market changes. Nevertheless, unemployed people cannot be forgotten on this issue, as preventive measures mainly refer to the employed.

- Workshop 6 – The European Social Fund in the Objective 1 regions

Evaluation and prospects of ESF operations in the Objective 1 regions is vital due to the fact that almost half of ESF budget is allocated there. ESF actions in this area are of core importance, as the goal of creating the Economic and Monetary Union is dependent on the level of economic and social cohesion of all member states, therefore ESF, through its programmes concerning development of human resources, should contribute to the development of the poorest regions. It was also stressed that each region should be approached individually, and horizontal approach should only provide a framework for ESF actions, as only then ESF assistance can be truly effective (EC, 1998a).

This Congress made an important contribution towards increasing the effectiveness of human development programmes financed within the ESF framework, as its provisions were reflected in the ESF reform of 1999, which laid the foundations for ESF operations at the beginning of the twenty-first century.

8. The European Social Fund Framework for the period 2000-06

Despite the considerable success of the cohesion policy in recent years, following the provisions of the ESF Congress, the Commission still identified several serious problems to be dealt with by the Structural Funds. One of these problems is unemployment, which did not decrease significantly, especially in less developed regions. Taking into account the past experiences of the Structural Funds operations, and challenges that lie ahead of the European Union in the next century, a deep reform of the whole structural policy was adopted by the European Council in Berlin in June 1999. In general, it was the continuation of the previous reforms of the Structural Funds. Here I will discuss only these provisions which refer to the European Social Fund.

First of all, the number of Objectives was cut down from six to three, with Objective 1 designed for less developed regions, Objective 2 for regions confronted with major economic and social restructuring needs, but not eligible for Objective 1, and Objective 3 with a role to assist in the development of human resources in regions not eligible for Objective 1 and 2. Its main tasks considered fighting unemployment,

promotion of equality of all groups of people on the labour market – women, ethnic minorities, etc. (CR, 1998).

Taking into account all the above mentioned problems and challenges, the European Council adopted in July 1999 a new regulation which created the ESF framework for the period 2000-06. The reformed ESF finance projects were carried out under all three objectives, and it concentrated on developing and promoting active labour market policies to combat unemployment, especially long-term unemployment and unemployment of young people. ESF should also assist in promoting equal employment opportunities for all by supporting training and counselling schemes. Moreover, ESF also supports development of entrepreneurship, as well as education aimed at adapting a workforce to the changing needs of the labour market. Considerable attention is also paid to improving women's access to the labour market, especially after maternity leaves. In realising these objectives, ESF should concentrate on support for local initiatives concerning employment, labour market needs of the information society, and equal opportunities for men and women. Special assistance should also be given to innovative projects concerning training or employment, development of a highly qualified workforce, and increasing self-employment. ESF should also develop systems of anticipating changes in employment and qualification needs in order to act preventively also. Finally, the possibility of financing preparatory, monitoring and evaluation operations was also maintained, especially when it involves innovatory operations, studies having a multiplier effect, and exchange of knowledge and experience between different beneficiaries of the Fund.

The regulation also redefined the principle of concentration of assistance. According to this, the ESF should concentrate its efforts in a limited number of areas, and should be directed towards the most important needs, and the most effective operations, in order to maximise the efficiency of the ESF resources.

Finally, the concept of Community Initiatives was also reformed, as their number was cut down to four, one of which, EQUAL, aimed at combating discrimination and inequalities in connection with the labour market (OOPEC, 1999, p. 5-8).

As far as financial resources for the structural policy are concerned, there was also great progress, as the total budget for all structural funds for the period 1994-99 amounted to EUR 138 billion, and for the period 2000-06 amounted to EUR 195 billion (Kawecka-Wyrzykowska and Synowiec, 2001, p. 407).

9. Conclusions

Studying the case of the oldest of all the Structural Funds, the European Social Fund, we can observe a particular pattern in operation for the European Community. This pattern involves a tremendous ability to take actions, which respond to momentarily appearing needs. Naturally, as this is a very big organism, there is a certain time lapse in these actions, but it only allows deeper analysis of the current situation and choosing instruments which are best suited to tackle a particular problem. This remained true throughout the whole-analysed period. With new problems arising, new instruments and measures were created, and support was adequately increased. This conclusion arouses one important question, very much relevant at the threshold of the accession of

a large number of new member states to the EU: In what way will the European Union respond to the increased problems which this accession will bring? Will it be able to expand structural policy to such a dimension, that all countries, old and new members, will receive the needed help? In my opinion these questions are very important, as the answers to them depend upon the future welfare of the whole European Union, and especially its poorer members. We all know what problems candidate countries have in executing the financial commitments of the EU, especially when future Structural Funds are concerned. But the real unknown awaits beyond the year 2006, when a new programming period starts. I am afraid, that with the growing unwillingness of the richest countries to pay for the poorest, it will be very difficult for the new members to force solutions, which will guarantee lowering the civilisation gap.

References:

- CEC (1986), *European Economy. Annual Economic Report 1986-87*, Commission of the European Communities, Brussels.
- CR (1998), *Reform of the Structural Funds*, Committee of the Regions, Brussels, March 1998.
- EC (1996), *The Structural Funds in 1995 – Seventh Annual Report*, The European Commission, Brussels.
- (1997), *The impact of structural policies on economic and social cohesion in the Union 1989-99*, The European Commission, Brussels.
- (1998), *The European Social Fund, an overview of the programming period 1994-99*, The European Commission, Brussels, March.
- (1998a), *ESF InfoReview 6. Investing in people: the ESF Congress*, The European Commission, Brussels.
- Kawecka-Wyrzykowska, E., Synowiec, E. (eds.) (2001), *Unia Europejska. Przygotowania Polski do członkostwa*, Instytut Koniunktur i Cen Handlu Zagranicznego, Warsaw.
- OOPEC (1999), *The Council Regulation No 1784/1999*, OJ L 213, Office for the Official Publications of the European Communities, Luxembourg, 13 August, pp. 5-8.
- (2000), *Eurostat Yearbook 2000*, Office for Official Publications of the European Communities, Luxembourg.

Convergence across European Union Members and Consequences for the Czech Republic

Patrik Bauer

The difference in GDP per capita between the Czech Republic and the EU average is considerable. Because the Czech Republic's aim in the long run is convergence to the EU average, the essential question is whether the Czech Republic would converge after its expected entry into the EU.

In this paper convergence based on neo-classical growth models is analysed. Theoretical and empirical results of convergence are deduced and the main determinants, by which the value of GDP per capita in a steady state is influenced, are specified.

Then the hypothesis of absolute convergence (β convergence) in the EU in the period of 1960-2000 is tested by an econometric model. The convergence among the EU members was observable, but the speed of convergence was slow.

The EU enlargement of the CEE transition countries is unique, however, the growth effects of economic integration with the EU can be illustrated, primarily by the experience of 1970-80s enlargements. Thus the experience of the entries of Ireland, Greece, Spain and Portugal into the EU is examined and the possible consequences of the Czech Republic's entry to the convergence are derived.

The main result is that EU accession should have a positive impact on the GDP per capita of the Czech Republic and should support convergence to the EU average. But convergence will not be an automatic phenomenon and the real benefits will depend on the Czech Republic itself.

1. Introduction

After the Velvet Revolution of 1989 the Czech government declared the most important political and economic issue – European Union (EU) accession. Although the Czech Republic is supposed to become an EU member in a few years, nowadays EU accession remains the most important political and economic aim.

Considering the Czech Republic as a country belonging to European structures, the economic indicators of the Czech Republic have to be compared with the economic indicators of EU members. Adopting the GDP per capita (in PPP) as an indicator for comparing living standards, the immense difference between the EU average and the Czech Republic has to be admitted (in the year 2000 GDP per capita of the CR was only 59% of EU average (see: *Ekonom*, 2000) and 91% of the poorest EU member, Greece, while in the 1955 it was 350% of Greece and 230% of Spain (see WB, 1999).

If the Czech Republic aspires to converge to the EU average after entry into the EU, the crucial question is whether the convergence occurs between the EU members (if there is higher economic growth in countries where GDP per capita in PPP is lower), if need be, how fast is this convergence?

Empirical results indicate the occurrence of convergence between the countries (or regions) with similar institutional environments¹. If these environments differ significantly, then the empirical results prognosticate slow divergence.

From the experiences of past European integration (during the 1970-80s) it can be derived that the convergence after entry into the EU can be substantial (the cases of Ireland, Spain and Portugal), however, convergence is not automatic (in the case of Greece, divergence occurred slowly).

In this paper the hypothesis of absolute convergence (β convergence) across the EU members is tested and past European integration is analysed. Then possible consequences for the countries seeking EU accession (especially the Czech Republic) are predicted.

The paper is divided into the three parts. In the first part, the models of economic growth and questions of convergence are analysed. In the second part, the empirical results of convergence are summarised and the econometric model for the absolute convergence hypothesis testing is arranged. In the third part, past European integration is analysed and the consequences for countries seeking EU accession are discussed.

2. Models of economic growth and convergence

In the 1960s the basic neo-classical growth model was formed (by Robert Solow, thus the model is called the Solow growth model). By the integration of some factors that were exogenous in this model, the models of endogenous growth were formulated.

As the basic Solow growth model (see for example Romer, 1996) claims, GDP per capita in a steady state of a particular economy depends on the amount of capital per capita and the technology².

The basic model is specified by the endogenous growth models³, however, the main factors, by which the value of GDP per capita in a steady state is influenced, are:

- amount of physical capital per capita,
- amount of human capital per capita,
- technology (the other factors).

2.1. Questions of convergence

Convergence is predicted by the neoclassical growth models under specific circumstances (the absolute convergence hypothesis (β convergence) is accepted). As is declared by the absolute convergence hypothesis, within two countries (or regions) with similar institutional conditions the country (region) with lower GDP per capita will tend to grow faster.

As is stated by the World Bank (WB, 1999, p. 33): “A less strict version of convergence, which assumes that all countries are not equal and in fact differ in many

¹ In this paper, institutional environment means tastes, technologies, political institutions, policies and so on.

² In the model technology is considered as a “residual value” – it is called Solow residual (it includes the other factors by which the GDP per capita in a steady state is influenced).

³ Primarily research and development models and human capital models – see Romer (1996).

aspects is the so-called conditional convergence, also known as σ convergence. This type of convergence implies declining cross-sectional dispersion of per capita income across units [...] The basic difference is that while absolute convergence relates to the relationship with initial level of income and subsequent growth rates, conditional convergence implies that each country has its own steady state level of income and will grow faster the farther away it is from this level. Growth is thus affected by a number of things, including the policy framework a country chooses to implement.”

In neo-classical growth models, an increase in GDP per capita is a consequence of an increase in the amount of capital (physical or human) per capita or the development of technology.

Convergence depends on assumptions of the models. Under the assumption of production function with diminishing returns to capital, an economy with a lower amount of capital per capita will tend to grow faster than an economy with a higher amount of capital per capita (thus an economy with lower GDP per capita will tend to grow faster than an economy with higher GDP per capita and convergence will occur). The speed of convergence depends on the rate of free movement of production factors that should flow from richer to poorer economies (because of the higher rate of return in poorer economies).

Another way in which convergence can occur is the technology development. In theory it is assumed that there are no barriers to adopt the best technology (including the institutional environment) in every economy, but it can be a problem in practice. According to the assumptions of the models, the technology development is in the long run the main source of the GDP per capita growth.

As the long-run result the same “best” technologies are established and the same amount of capital per capita in every economy. Then there are the same GDP per capita in a steady state in every economy.

Under other assumptions, the results are different. For example, under the assumption of increasing returns to capital divergence will occur instead of convergence.

3. Empirical analysis of convergence

In recent years, there have been a large number of empirical studies aimed at the problem of convergence (see Barro, 1994, 1997; Barro and Sala-i-Martin, 1995; EC, 2000a).

As Barro and Sala-i-Martin (1995, p. 413) claim: “We can interpret the results as consistent with the neoclassical growth model [...] if regions within a country have roughly similar tastes, technologies, and political institutions. This relative homogeneity generates similar steady-state positions. [...] One surprising result is the similarity of the speed of β convergence across data sets. The estimates of β are around 2-3 percent per year in the various contexts. This slow speed of convergence implies that it takes 25-35 years to eliminate one-half of an initial gap in per capita incomes.”

As the European Commission (EC, 2000a, p. 180) declares: “Neven and Gouyette (1994) investigated β convergence for all NUTS II level EU regions for the period

1980-89 in terms of per capita income relative to the EU average. Absolute convergence was found to be very weak (0.5% per annum).”

3.1. The absolute convergence (β convergence) hypothesis across the EU members

The absolute convergence hypothesis across EU members will be tested by using a simple econometric model.

The data for 14 EU members will be used to estimate the coefficients of the model (all members except for Luxembourg⁴). The data sources are the European Commission (EC, 2000a) and the calculations of the author.

As is assumed by the absolute convergence hypothesis, an economy with the smaller value of GDP per capita will tend to grow faster than an economy with the higher value of GDP per capita. To test this hypothesis GDP per capita in 1960 is chosen as an explanatory variable and average GDP per capita growth (during the period 1960-2000) as a dependent variable. Thus the coefficients of the following equation are estimated:

$$g = \beta_0 + \beta_1 * \log \text{GDP_60} + u,$$

where:

g average GDP p. c. growth (during the period 1960-2000, p.a.),
log GDP_60 log GDP per capita in 1960 (PPS of Eurostat).

Table 1. Regression results:

	B	St. Err. of B	t(13)	p-level	R²=0.81
Intercpt	0.1288	0.0141	9.1209	0.0000	
Log GDP_60	-0.0340	0.0048	-7.0954	0.0000	

Notes: for verification of basic assumptions, see: Appendix.

The explanatory variable GDP_60 is statistically significant at 99% level and the coefficient of determination is relatively high. Because B₁ is negative the hypothesis of absolute convergence would be accepted (for the 40 year long period 1960-2000).

Convergence across the EU economies occurred during the past 40 years. How fast was this convergence? As can be stated from the results, the higher was the gap between the GDP per capita of the particular economy in 1960 and the EU average, the faster was the convergence. But the speed was generally slow, per annum was closed less than 1% of the existing gap.

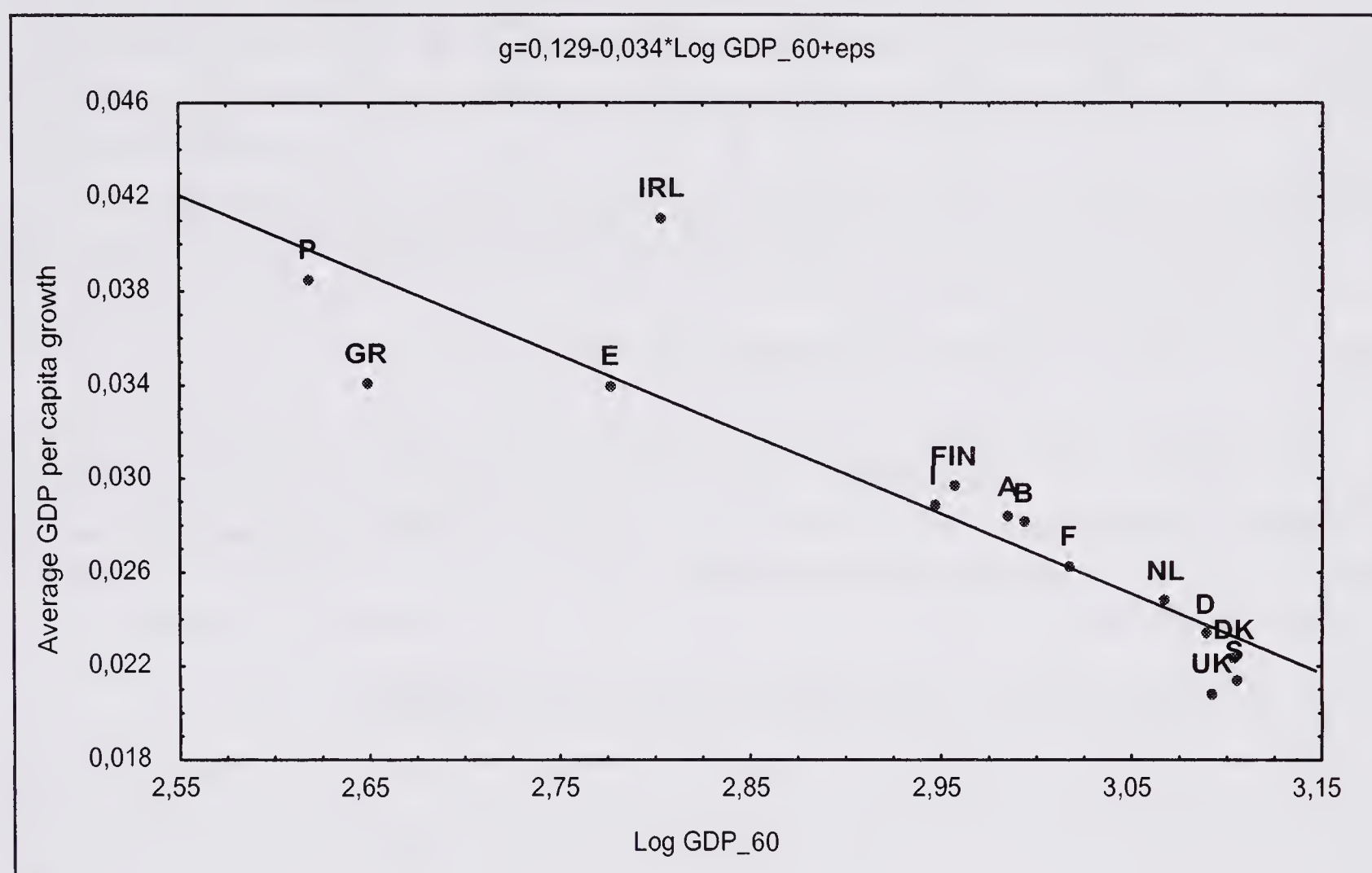
The main shortage of the model (except of small data sample) is the fact that not all 14 economies were the EU members during the whole 40 year long period 1960-2000 (only seven countries were EU members in the past 40 years).

While the countries which joined the EU in 1995 (Austria, Finland, Sweden) are not so interesting examples of the recent EU candidate countries (especially the CEE

⁴ Some anomalies were exhibited by the Luxembourg economy, thus it was omitted from the analysis. There will not be a strong distortion in results because GDP of Luxembourg is only 0.2% of the EU and population is 0.12% of the EU.

transition countries), the experiences of countries which joined the EU during the 1970-80s are more relevant. In the next chapter there is the analysis of this past European integration, the EU accession of Ireland (joined the EU in 1973), Greece (1981), Spain and Portugal (both 1986).

Figure 1. Graphical illustration of the regression results (as in table 1)



4. The experience of Ireland, Greece, Spain and Portugal in European integration

However the EU enlargement of CEE transition countries is unique, the growth effects of economic integration with the EU can be illustrated by the experience of 1970-80s enlargements.

Ireland, Greece, Spain and Portugal were all in a better position than recent CEE candidate countries because a functioning market economy existed. By the time they joined the EU their GDP per capita was at 59% of the EU average for Ireland, 69% for Greece, 70% for Spain and 54% for Portugal, which is more or less similar to CEE candidate countries.

Because sufficient time has passed since these countries joined the EU, the growth effects of economic integration can be analysed. Some facts are summarised in table 1.

As is shown in table 2, the convergence occurred in three cases out of four, in the case of Greece slow divergence occurred. The speed of convergence was slow, except for Ireland in 1990s. C. 2% of the gap between the particular country and EU average was closed per year. In the case of Ireland in 1990s, its GDP per capita growth was accelerated by institutional environment reforms. GDP per capita in a steady state was

probably increased by these reforms and because of conditional convergence, Ireland did not only converge to the EU average, but exceeded this level significantly.

Table 2. GDP per capita convergence of Ireland, Greece, Spain and Portugal

	1960	1970	1980	1985	1990	1995	2000	Index
	GDP per capita (EU-15 average = 100)							
Ireland	61	60	64	65	74	96	119	202
Greece	44	63	70	64	58	66	67	97
Spain	57	71	70	70	77	79	83	119
Portugal	40	50	55	53	61	71	75	139

Notes: Index measures the improvement of a particular country relative to the EU-15 average between the year of accession and 2000 (for example 202% for Ireland means growth from 59% to 119%).

Source: WB (1999), EC (2000a), calculations of the author.

Thus, mainly Ireland profited from EU membership, while Greece did not utilise the potential of EU membership. The results are probably determined by the institutional environment. Then convergence is not a natural phenomenon, but it is conditioned by the institutional environment.

4.1. Benefits of the EU accession for the Czech Republic

In chapter 2 the neoclassical growth models were analysed and the main factors by which the GDP per capita in a steady state is determined were described. How will EU accession influence these factors and consequently the GDP per capita in a steady state?

- Amount of physical capital per capita – Ireland, Spain and Portugal experienced after entry an increase in investment, while Greece instead, experienced a consumption boom. According to the World Bank (1999, p. 27): “The investment boom was driven primarily by the reduced political risk, the restructuring of the capital stock in view of new production patterns, and the introduction of new technologies accompanied by increased FDI.” A similar positive effect on investment of entry into the EU can be reached by the Czech Republic.
- Amount of human capital per capita – the Czech Republic should experience an increase in the amount of human capital per capita as a consequence of joining the European educational system, adopting higher standards in education and introduction of new technologies, demanding more human capital.
- Technology – entry into the EU should cause the convergence of technology (institutional environment, technologies of production, and so on) to European standards. The integration of Czech companies into European production structures and the inflow of FDI will also be important.

Thus EU accession should have a positive impact on the GDP per capita of the Czech Republic and should support convergence to the EU average. But convergence

will not be an automatic phenomenon and the real benefits will depend on the Czech Republic itself⁵.

5. Conclusions

In this paper convergence based on neoclassical growth models was analysed. Theoretical and empirical results of convergence were inferred and the main determinants of the GDP per capita value in a steady state were specified (the amount of physical capital per capita, the amount of human capital per capita and technology >>the other factors<<).

By the econometric model was accepted the hypothesis of absolute convergence (β convergence) in the EU in the period of 1960-2000. The convergence among the EU members was observable, but the speed of convergence was slow (only 1% of the gap between the particular country and the EU average was closed every year).

EU enlargement of the CEE transition countries is unique, however, the growth effects of economic integration with the EU can be illustrated, primarily by the experience of 1970-80s enlargements. Thus, the experience of the entries of Ireland, Greece, Spain and Portugal into the EU was examined and the possible consequences of the Czech Republic's entry to the convergence were derived.

Convergence occurred in three out of four cases (Ireland, Spain and Portugal), in the case of Greece slow divergence arose. The speed of convergence was slow, except for Ireland in 1990s. Approximately 2% of the gap between the particular country and the EU average was closed per annum. In the case of Ireland in 1990s, its GDP per capita growth was accelerated by institutional environment reforms. GDP per capita in a steady state was probably increased by these reforms and because of conditional convergence, Ireland did not only converge to the EU average, but exceeded this level significantly.

Thus, mainly Ireland profited from EU membership, while Greece did not utilise the potential of EU membership. The results were probably determined by the institutional environment. Then convergence is not an automatic phenomenon, but it is conditioned by the institutional environment.

EU accession of Ireland, Greece, Spain and Portugal influenced the main determinants of the GDP per capita value in steady state. Ireland, Spain and Portugal experienced after entry an increase in investment, while Greece instead underwent a consumption boom. The technology was influenced mainly by the FDI inflow (especially in the case of Ireland).

The main result is that EU accession should have a positive impact on the GDP per capita of the Czech Republic and should support convergence to the EU average. But convergence will not be an automatic phenomenon and the real benefits will depend on the Czech Republic itself.

⁵ As was investigated, the positive impact of the EU accession on growth is conditioned by the institutional environment.

Appendix

Verification of Basic Assumptions

a) Normality

To test for normality, a test based on the values of moments of distribution can be used (see Kmenta, 1997, p. 266).

index of symmetry..... $a_3=1.2587$

index of kurtosis..... $a_4=5.7591$

$$\text{stat} = n(a_3^2/6 + (a_4-3)^2/24) \sim \chi^2_2$$

$$\text{stat} = 8.138$$

Tabulated value of χ^2_2 at 5% (1%) level of significance is 5.99 (9.21). At 5% (1%) level, the hypothesis of normality would (would not) be rejected.

b) Homoskedasticity

To test for homoskedasticity, White test can be used (see Víšek, 1997, p. 87).

$$\text{White } d = 2.64473$$

$$\text{White } d \sim \chi^2_2$$

Tabulated value of χ^2_2 at 5% (1%) level of significance is 5.99 (9.21). At 5% (1%) level, the hypothesis of homoskedasticity would not be rejected.

c) Independence of disturbances

To test for the absence of autocorrelation, Durbin-Watson test is usually used (see Durbin and Watson, 1952).

$$d = 1.803$$

Tabulated value is $d_U=1.350$ ($d_U=1.054$) at 5% (1%) level of significance.

Thus $d_U < d < (4-d_U)$ at 5% (1%) level and the hypothesis of no autoregression would not be rejected at 5% (1%) level of significance.

References:

- Baldwin, R., Seghezza, E. (1996), *Growth and European Integration: Towards an Empirical Assessment*, Centre for Economic Policy Research, No. 1393.
- Barbone, L., Zalduendo, J. (1998), 'EU Accession of Central and Eastern Europe: Bridging the Income Gap,' *Policy Research Working Paper*, No. 1721, World Bank.
- Barro, R. (1994), *Economic Growth and Convergence*, ICEG No. 46.
- (1997), *Determinants of Economic Growth, A Cross-Country Empirical Study*, The MIT Press, Cambridge, Massachusetts.
- Barro, R., Sala-i-Martin, X. (1995), *Economic Growth*, McGraw-Hill, New York.
- Cahlík, T. (1998), *Makroekonomie*, Karolinum, Prague.
- (2000), *Česká republika po vstupu do EU*, IES FSV UK, Prague.
- Dornbusch, R., Fischer, S. (1994), *Makroekonomie*, SPN, Prague.
- Durbin, J., Watson, G. S. (1952), 'Testing for serial correlation in least squares regression', *Biometrika*, 37, pp. 409-428.
- Ekonom* (2000), 'Pravidelná zpráva Evropské komise o ČR za rok 2000', No. 47.
- EC (2000a), 'The EU Economy: 1999 Review', *European Economy*, No. 71, the European Commission.
- (2000b), *2000 Regular Report on the Czech Republic's Progress Towards Accession*, European Commission.
- Hušek, R. (1999), *Ekonometrická analýza*, Ekopress, Prague.
- Kmenta, J. (1997), *Elements of Econometrics*, 2nd edition, The University of Michigan Press.
- Romer, D. (1996), *Advanced Macroeconomics*, McGraw-Hill, New York-London.
- Víšek, J. A. (1997), *Ekonometrie I*, Karolinum, Prague.
- WB (1999), *CR – Toward EU Accession*, World Bank.

The Stability and Sustainability of the Polish Economy to integrate into the European Union

Abey Hailu Senbeta

1. The macro-economic framework

It has become commonplace in recent years to name Poland as one of the most successful of the transition economies (Berg, 1993). A pioneer in transition from the very start, the country has since confirmed this status on numerous occasions, most importantly in being the first to reverse the output decline in 1992. Rooted in the bold and comprehensive reforms of the initial big-bang (Wolf, 1991), this success owes equally to the remarkable continuity of commitment to the principles of market orientation and financial stability, irrespective of the composition of the seven governments that have been in power since 1990 (Havlik, 1993). Two particular milestones in this regard were a major second round of fiscal adjustment and structural reforms in 1992, and sustained adherence to those principles by the new left-wing coalition that came to power in late 1993, embodied in the medium-term Strategy for Poland adopted in mid-1994 (Kaja, 1999). The results have been successive years of economic growth, averaging 6% over the past years; steady, even if gradual, progress to moderate inflation; and a dramatic shift from a chronically weak external position to one of fundamental strength with large reserves.

While much has been achieved, transition is by far not finished so far, in part reflecting the somewhat fitful progress in economic, systemic and structural reforms after the initial big bang (Kołodko, 1993; see also: Gotz-Kozierkiewicz, 1991c; Lane, 1991). Increasingly, moreover, the agenda of outstanding reforms is dominated by Poland's over-arching goal of full integration with the most advanced industrial economies, in particular its objective of early accession to the European Union. From a macroeconomic perspective, key issues here include Poland's relatively low savings and investment ratios (both below 25% of GDP) and its still high inflation rate about 10%, both obstacles to the kind of sustained rapid growth required for smooth integration. A strategy to overcome these obstacles should centre on further fiscal consolidation, tight monetary policy, and structural measures to bolster private savings, most important among them, comprehensive and deep pension reform (MLSP, 1993). Another key policy imperative arises from the still pervasive role of the state in the economy; in particular, rapid privatisation of most of the remaining 3,000 or so enterprises still under the umbrella of the state will be pivotal in raising efficiency and attracting private capital on the scale required to ensure continued rapid economic growth.

Taking this and other factors into consideration, I will try to analyse the facts, which I consider, is the picture of the Polish social and economic description. To begin with, I will first try to portray the social and demographic situation of the country.

2. The social and demographic structure

Since the beginning of the last decade, the Polish demographic picture has taken a dramatic turn, and the number of little Poles coming into the world has started to fall (Holzer and Kowalska, 1997). In only one decade, Poland's demographic structure has changed from that of a semi-traditional society into a stabilised and mature population, which is still different from those of neighbouring European countries, in that it includes a larger share of youths since Polish families only recently psychologically adopted a restrictive birth rate.

Besides the decline in mortality typical of developed societies, Polish demography has been featured in recent years by three developments which are directly linked to each other: a fall in the fertility rate, the decline in the birth rate and a slower natural rate of growth of the population. Thus the fertility rate in Poland, which was 76 per 1000 women in 1980, fell to 39 per 1000 women 1998 (GUS, 1997, 1999), well below that required for a population growth rate, among the lowest level in the CEEC (the average for the EC in 1990 was 1.55. The Polish reproduction rate of population was halved during the same period, from 2.276% in 1980 to 1.431% in 1990.

As a result, even though Poland enjoys a comparatively young age demographic structure, natural growth of the Polish population has significantly plummeted. As the sudden change in the demographic trend took place only recently, the Polish population is still one of the youngest in Europe along with those of Ireland and Portugal. Consequently, the impact of the sharp fall in the Polish birth rate will be felt mainly in the coming decades.

This does not seem to be the classical problem of the work force/number of dependents ratio, because the low ratio of the work force to the total Polish population (on account of the lag in the number of women joining the labour market) will lengthen the period for adjusting to the new demographic structure, particularly if the increase in the number of women in the work force is combined with an increase in productivity by massively (and intelligently) introducing new technologies in the work process. The social problem arising from the new demographic model might rather consist in the difficulty of such an extrovert culture as the Polish culture, based on typically youthful values, adjusting to a population in which older age groups prevail (Maret and Schwartz, 1993). Adding to that the almost inevitable trend towards a growing immigrant population, which is younger and has a higher birth rate, Poland could end up having a conflicting demographic structure like that of some other European countries where an aged native population is culturally in conflict with its own children and with the younger generations in which foreign social groups and ethnic minorities are over-represented (Gál, 1999; see also: Opalski and Dutkiewicz).

However, such a future (loaded with negative prospects) is not inevitable. Having a more balanced age pyramid than most other EU countries, Poland still has some time to go before arriving at a critical situation regarding population growth, and the trend could still revert towards higher fertility and birth rates. There is nothing that proves that a declining birth rate is a long-term trend in developed societies (UN, 1999). For instance, the recent trend seen in Scandinavian societies is quite the opposite: Sweden has the highest fertility rate in Europe today.

In fact, demographic behaviour seems to be closely linked to the condition of women in society. Thus, in the initial period of modernisation, when women join the work force without any basic change taking place in the sexual division of labour, they find it hard to hold a job and to do the housework at the same time, while their level of education rises and birth control methods enable them to control strictly the number of children (UNICEF, 1993). As the condition of women in society advances and nurseries as well as child care services become available, and as labour legislation as well as cultural patterns correct the family and labour inequality of the sexes to a certain extent, women have more choice and can therefore have more children again without self-amputation of their lives. The fact that Poland has reached the level of the German model with a sufficient lag to take a qualitative jump to the new 'Swedish' model before becoming an aged society, provides hope that a belated modernisation may turn out to be a more intelligent modernisation in demographic terms as well (Stolnitz, 1992). But that will depend to a large extent on the condition of women in Polish society undergoing a complete change. Because in the last analysis, the sexual division of labour, both in the family and in society, remains the basis of the social structure.

3. Trade: import and export

Poland is a large and increasingly open economy: exports account for roughly one quarter of GDP, which makes the openness of the Polish economy comparable to that of EU member states of a similar size in terms of population.

In June 1995, the IMF confirmed the full current account convertibility of the zloty. Analysts have unanimously shown interest in the question of the competitiveness of the Polish economy in the studies they have carried out on the Polish economic situation and prospects since the beginning of the transition period (Gotz-Kozierkiewicz, 1991b; see also: Black, 1976; CEC, 1993; Kołodko, 2000; Balcerowicz, 1993; OECD, 2000; PlanEcon). But when they come to defining, measuring and, above all, discussing the necessary moves for improving this competitiveness, they take different views (Havlik, 1993; see also Lipschitz and McDonald, 1991).

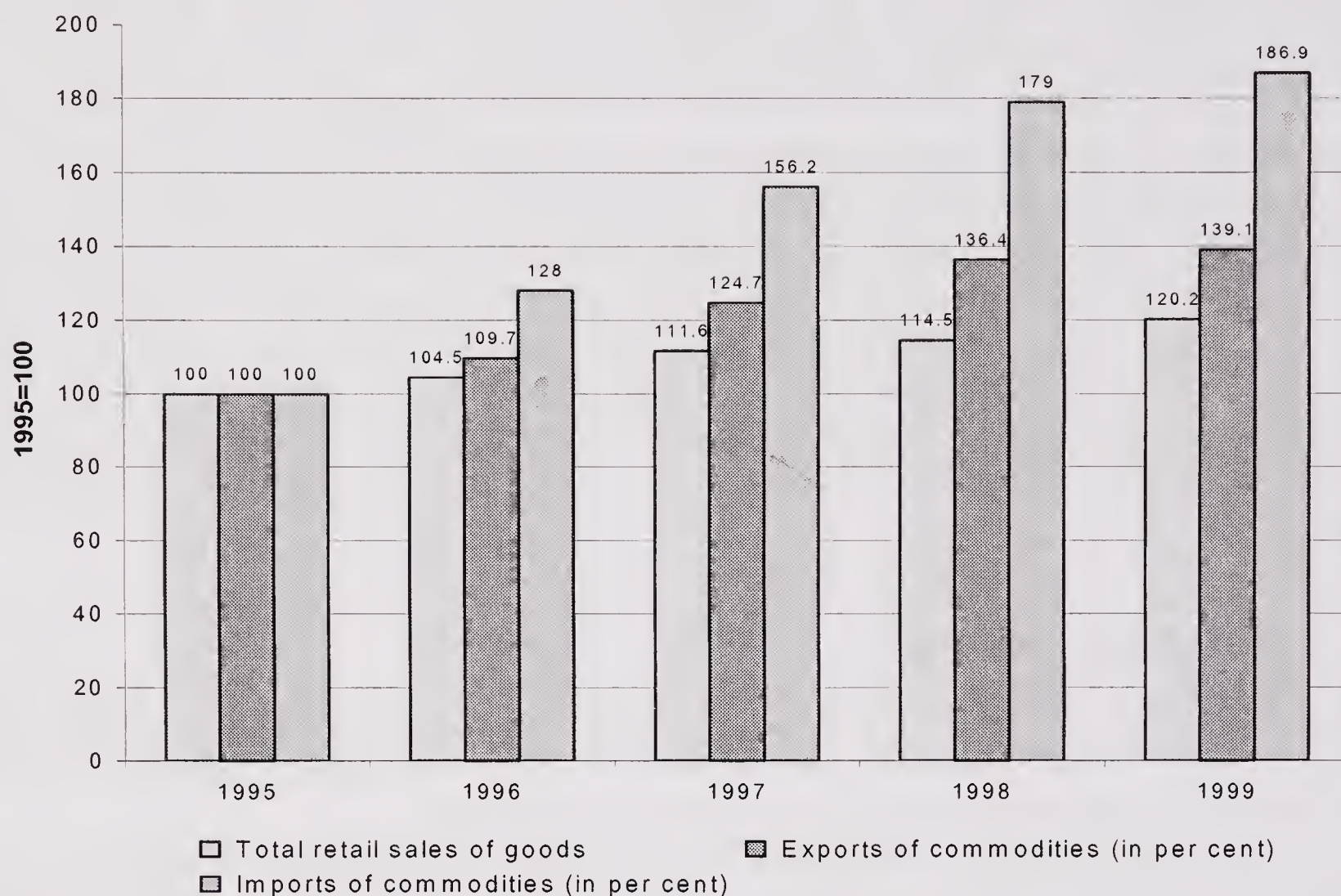
The competitiveness of an economy is a very complex variable, which can be measured in three ways (Marsh and Tokarick, 1994):

- in terms of production costs;
- in terms of prices; and
- in terms of the market share of the exports.

In principle, costs, prices and share of exports could all be expected to behave consistently. But the empirical evidence available shows that it is not always so (Isard, 1977). That is due to the fact that costs are reflected in prices in different ways depending on the type of activity in question. The competition in world trade nowadays is based not only on prices, but also on the size of companies, on the development of transnational marketing networks, on the offer of good post-sale services, or on the design of differentiated products (GATT, 1993). The above explains

why exports do not always behave according to the trend in the indices, which reflect the competitiveness in terms of costs and prices.

Figure 1. Domestic and foreign trade of Poland



Source: Compiled from GUS (1999).

The comparative study of the evolution of these variables disaggregated by sectors shows which are the branches of industry where the Polish domestic market as well as in export performance is not in line with the trend in relative costs and/or prices (Gomulka, 1993). In what may seem a paradox, many industries in Poland have done better in exports during the 1990-1999 period than the manufacturing industry has on average, despite showing a worse index of costs and/or prices.

A single indicator reflects the changes which took place in the competitiveness of a given industry for reasons other than costs and prices, i.e. merchandise exports as a percentage of merchandise imports within the same sector.

The share of exports in nearly all the branches of Polish manufacturing industry has been increasing systematically, which could in principle be taken as a sign that the competitiveness of goods made in Poland is relatively improving. However, before taking that to be a fact, we have to find out, if Polish products have also been able to increase or at least hold on to their share of the domestic market in the face of imported products.

That has not been so. Polish products have steadily lost ground to imported products in meeting domestic demand throughout the period, even though there are certain minor exceptions to this general rule. That questions the conclusion drawn in

analysing exports about a good performance of the competitiveness of Polish products, and brings to light the true meaning of these results, which is that Polish industry is not adjusting commercially to integration in the EU and to global competition in the manner that could be expected according to the more favorable forecasts (Kaminski, 1993). In theory, a number of sectors, which initially had lower labour costs and where investment and innovation have been carried out, were expected to have a competitive advantage.

Other branches of Polish industry, which were not in such good condition to compete but in which there is a high level of foreign investment and action has been undertaken to modernise production, were also expected to improve their competitiveness. The industries with better prospects are the technologically more sophisticated ones (computers, office equipment, telecommunications, etc.), in which Polish companies only have a small presence in the domestic market and are clearly at a disadvantage on the world market. However, things have turned out differently.

As data shows, Polish products are losing out in Polish markets to goods imported from other EU countries and, to a lesser extent, from third countries. The darker-than-expected picture concerning the competitive performance of Polish industry at a time when trade is being liberalised as a result of changes at the beginning of the 1990s, turns out to be even more serious on looking at the changes recorded in the trade balances by branches of the manufacturing industry in recent years. According to these charts, during the transition/transformation period, the trade balance for all branches, without exception, with both EU and other countries, worsened noticeably.

As the disaggregated Polish foreign trade figures show, the trade balance has worsened in every sector, including those which had a competitive advantage prior to the transformation period. What we are witnessing are the combined effects on Poland's foreign trade with the integration of the EU economies and of the spread of technological innovations in the field of information, communications and new materials.

The new forms of production and organisation are altering the international structure of comparative advantages (Rollo and Smith, 1993). These types of constraints on the one hand, tend to undermine the competitive position of countries whose advantages consist only in the availability of raw materials, and of those whose main advantage is the low cost of their unskilled labour (Ksiezopolski, 1991). On the other hand, the availability of such technologies enhances the competitive position of those economies whose comparative advantages are having qualified human resources and technological capacity.

Polish trade has been reoriented since the beginning of the economic transformation process in 1991. The major structural change in Poland's trading relationship is due to the collapse of the COMECON-trading block (Vlad, 1990; see also: Calvo and Coricelli, 1993; Chadha et. al., 1993; Commander and Coricelli, 1992). The EU remains Poland's main trading partner and Poland is the seventh trade partner for the EU. In 1997, Poland exported 64% of total exports to the EU and imported 64% from the EU. More recently however, Polish exports to Central and Eastern Europe and Russia have rapidly expanded (presently 20-24% of Polish exports). Russia has become Poland's second biggest trade partner, after Germany.

Even without similar studies on many sectors and particularly on the agricultural sector, I may say that the weak competitive position of the Polish industrial structure should not be considered as a problem arising solely from an unfavourable trend in comparative costs and of exchange even though these are important factors, but it should be considered as a problem arising from a wider restriction linked to rigidities in the Polish labour and capital markets, low innovative capacity of Polish companies and other factors (trademark image, design, marketing networks, etc.) which are essential for competing in world markets today. The EU has had a trade surplus with Poland since 1991. Over the first six months of 1997, this surplus amounted to 4.96 billion ECU¹ and the coverage (exports/imports) was 172%. The trade surplus has expanded in 1998 to 5.91 billion ECU and the coverage rate was 175%.

The changes in the direction of trade have been accompanied by shifts in the products exchanged. Imports of transport equipment in 1997, related to a very dynamic automotive sector, showed the largest increase. The emerging import/export pattern with the EU includes a growing importance of many commodities but has a relatively sharp fall in the role of food and agriculture. The EU-Poland trade relations are regulated by the Europe Agreement. In 1997, Poland ranked the EU's eighth import market, with 2.1% of extra-EU share, and 5th export market, with 3.5% of extra-EU share. Poland's trade with the EU has continued to increase its share of total trade (Lenain, 2000). The largest part of trade concerns manufactured goods. During the first five months of 1998, Polish exports to the EU accounted for 65% of total Polish exports (Germany 30%, Italy 6% and Austria 6%). Imports from the EU amounted to 70% (Germany 29%, Italy 9% and Austria 6%) up from 64% in 1997. Poland's trade deficit with the EU widened from ECU 5.9 billion in 1996 to ECU 9.2 billion in 1997.

In the first six months of 1998 EU exports to Poland totalled 13.7 billion ECU, which represents an increase of 16% over the same period of the previous year. The evolution of EU exports to Poland (+16%) has increased faster than total EU exports to the rest of the world (+6% for the first half of 1998). Accordingly, Poland's relative share in total extra-EU exports increased from 3.49% in the first six months of 1997 to 3.80% over the same period in 1998 (compared to 0.95% in 1989) (GUS, 1999).

4. Consumption

In the face of weakening dynamics of business activity, the rate of indirect consumption increase has also fallen (consumption of products and services for their manufacturing). A fall of individual consumption was connected with a slower increase of household income, both as a result of reduction of hired work earnings dynamics and as a result of weakening of production and services growth in small corporates. The opening 'price scissors' in agriculture (relationship between price changes of products sold and price changes of products purchased by farmers from the level 101.8% in 1995, 96.0-95.8% in 1996-1997, deteriorated to 92.3% in 1998) resulted, despite favourable production results, in a further fall of nominal income of households connected with agriculture. The dynamics of capital expenditures was smaller than in previous years even though the rate of their increase was much higher than for other

¹ Using ECU is appropriate at this time, since euro has not yet been introduced.

components of the final demand. During the year, a gradual weakening of investment activity dynamics was observed as the assessments of future production sales deteriorated. Poor financial results of enterprises, limiting possibilities of investment execution on the basis of own funds, also contributed to that. The fiscal policy positively influenced reduction of demand in the first half of 1998 (NBP, 1999).

An increase of individual consumption was slightly higher than of gross disposable income. That resulted, after an increase in 1997, in a fall of gross savings rate of households. As it is preliminary assessed, that resulted from a relatively low growth of financial savings. There was a high increase of złoty deposits, indeed (although smaller than a year before), but the increase of cash money was smaller than in 1997, foreign exchange deposits diminished (NBP, 1999).

So it may be said, that the weakening of income growth not only reduced the rate of consumption growth, but also resulted in reduction of a tendency to savings by households. There were further changes in the structure of households expenditures. The share of expenditures connected with maintenance of accommodation rose from about 16.5% to almost 19%. The share of expenditures on flat hiring became close to 4%. The share of health expenditures exceeded 4%. Shares of expenditures on food, clothes and shoes decreased. Changes in the expenditure mix were consistent with a generally known regularity of reducing the share of primary needs in consumption with increasing income and wealth of households. An excess of supply of goods satisfying these needs and changes in the structure of consumer demand maintaining in the market, promoted a reduction of inflation.

In 1998 the rate of individual consumption growth was reduced to 4.8% compared with 6.9% in 1997 and 8.3% in 1996. The rate of individual consumption growth in 1998, like in 1997, was close to the GDP growth rate. In 1996 the real growth of individual consumption was clearly ahead of GDP growth. A decrease of consumer demand dynamics was connected with a reduction of the growth of disposable income to households. As currently estimated by the NBP they were in nominal terms about 16% higher than in 1997 and their purchasing power rose by about 4% (in 1997 by 23.4% and by over 7%, respectively).

Reduction of disposable income dynamics resulted mainly from a slower increase of gross primary income of households, especially connected with a gross operating margin on business activity. It is estimated that in farming households it was smaller than in 1997, even in nominal terms. In households outside agriculture hence mainly within families of small shops and manufacturing plants owners, to a large extent dependent on bazaar and frontier trade, a fall of income in real terms occurred. The dynamics of income from hired work, making more than 50% of primary income, despite an increase of employment was reduced from over 21% in 1997 to about 17% in 1998. Average earnings in the enterprise sector rose in 1998 by 16.1% and in real terms by 3.8%, compared with 3.2% growth assumed in the Budget Act for 1998. Average earnings in the budget sector (according to the GUS classification) rose in 1998 by 16.9% and in real terms by 4.6%, compared with the assumed growth of 1.8%. The share of government institutions subordinated to local self-governments increased substantially in 1998 and the higher level of pay in those entities vitally affected achieving a higher growth of average earnings in the entire budget sector.

5. Investment

Gross capital expenditures increased in real terms by 14.5% compared with 21.7% in the previous year. Significant investment activity was maintained in enterprises, even though with the generally deteriorating economic situation and financial results of enterprises (that for the future may denote a reduction of enterprises capability to accumulate free funds) a fall of investment rate was observed from over 27% in the first half of the year to about 19% in the third quarter and about 14% in the fourth quarter. Deterioration of enterprises financial results was apart from poor assessment.

The two key variables which are crucial for keeping up a high pace of growth are savings and exports (Berg, 1993). This is simply the result of the accounting principle that a country cannot systematically consume more resources than it is able to generate. Moreover, the economic history over the past years has shown that the bottleneck of the Polish economy lies essentially in the external deficit and, less frequently, in the economy's difficulty to generate savings (Kołodko, 1993).

Table 1. Dynamics of Gross Domestic Product volume growth and total gross capital expenditure in the economy and investment rate in 1991-1998

Specification	1991	1992	1993	1994	1995	1996	1997	1998
GDP	93.0	102.6	103.8	105.2	107.0	106.0	106.8	104.8
Gross capital expenditure	95.6	102.3	102.9	109.2	116.9	119.7	121.7	114.5
Investment rate (current prices)	21.7	18.7	17.7	18.0	18.7	20.9	23.6	25.0

Source: GUS (1997, 1998a, 1998b).

With this background, the main challenge confronting the Polish economy is the need to open it up and be competitive in the international market. This is a historical issue, and a sensitive one with a view to the future.

Poland’s ability to attract foreign direct investment (FDI) has been impressively enhanced in recent years (see also: Koćwin, 1999). This has been in part due to its liberalised policies concerning the free movement of capital in the context of its accession to the OECD in November 1996.² Until 1997 FDI into Poland was relatively low, but it has increased substantially since then. The inflow of FDI in the first half of 1998 was as large as for the whole of 1997, which would bring the accumulated inflow since 1990 at ECU 13 billion.³

In qualitative terms, FDI is playing a key role in the development of the Polish economy. More than 10% of total equity, and some 5% of overall employment, is connected with foreign capital. Moreover, the share of companies with foreign participation in investment outlays is approaching 50% in the manufacturing sector and

² OECD currently has 29 member countries. The original 20 members of the OECD were the Western countries of Europe and North America. Next came Japan, Australia, New Zealand and Finland. More recently, Mexico, the Czech Republic, Hungary, Poland and Korea have joined.

³ According to the European Bank for Reconstruction and Development estimates, EBRD (1999).

in trade and services (Du Pont, 2000). Interestingly, average labour productivity in these companies is reported to be twice as high as in the economy as a whole.

Apart from the above point, what matters for FDI in Poland is the difference of domestic and overseas interest rates, one of the factors that determine capital flows and hence exchange rate. When the domestic interest rate, taking into account the existing premium for the country risk and expectations in respect to a change of the domestic currency value, is higher than the foreign one, then portfolio investments rise resulting in the appreciation of the domestic currency, in a fall of overseas demand and of domestic production dynamics. Hence, appreciation may result in deterioration of the balance in the current account. On the other hand, the current and expected inflation is reduced by reduction of imports price dynamics and by increase of competition in the domestic market. So the exchange rate affects inflationary processes in the country both directly and indirectly.⁴

Since late 1993, foreign exchange reserves have been growing rapidly because of steady inflows of foreign and portfolio investment. In 1996 reserves stood at close to ECU 14bn, covering six to seven months of imports. The remarkable increase which took place in foreign investment within a period of a few years had a noticeable impact. 'They are buying up the country',⁵ was and still is an often-repeated phrase, even though at 4%, the GDP share of foreign investment in the GDP is lower than in the time of Spanish and Portuguese integration to the EC. In some sectors, such as the automobile industry, selling a company like Polish Fiat to foreign capital was justified on account of the need to link it to a multinational company in order to ensure its viability.

In other sectors, such as the food industry, acquisitions of medium and large-sized profitable companies by foreign investors reflected a weakness on the part of Polish businessmen to face the challenge of open markets. The breakdown of foreign investment shows that most of it was direct investment, and was concentrated in real estate, the financial sector, and in scale-intensive industries (automobiles, food, banks, chemicals), as well as in technologically advanced industries (machinery and equipment). Regarding its origin, foreign investment came mainly from EU member countries, and foreign companies already operating in Poland, many of them German and American companies.

Growth during the last years showed, that had foreign investment been halted, domestic investment would hardly have been able to fill the gap, as domestic savings did not suffice. In fact, over the last period, Polish families showed little propensity to save or, what amounts to the same thing, showed a high propensity to spend. The new trend of the social and economic structure reflects the weight of young people in the Polish population, new opportunities for obtaining liquidity as the financial system which has become liberalised, and the optimistic attitude which is natural in times of expansion and encourages people to believe that their income will grow in the future. However, fiscal treatment of savings also influences this trend.

⁴ *Inflation Report 1998*, Monetary Policy Council – National Bank of Poland, Warsaw, June 1999, pp. 34-35.

⁵ *The Economist*, 14 October 2000. These type of opinions have been presented in various media (Radio, TV, Newspapers) in Poland and abroad.

6. Employment and unemployment

The profile resulting from the overall changes over time in the economically active population comes out of the performance of the economy itself. Just to take the recent picture of this aspect, the economically active and inactive population, in the second quarter of 2000, the economically active persons amounted to 17,343,000, while the population of economically inactive persons amounted to 13,193,000. Compared to the previous quarter, the number of the economically active increased by 145,000 (i.e. 0.8%), which meant a growth in the number of the employed by 199,000 and at the same time a decrease in the number of the unemployed by 55,000. Compared to the first quarter of 2000 the number of economically active men increased by 77,000 (i.e. by 0.8%), while the number of women increased by 68,000 (i.e. by 0.9%). Whereas both: the number of economically inactive men as well as women was lower (respectively by 51,000, i.e. by 1.0% and by 45,000, i.e. by 0.6%).

More positive changes occurred on the rural labour market where a significant growth in the number of the employed was observed (by 125,000, i.e. by 2.3%) and a decline in the number of the unemployed (by 88,000, i.e. by 0.8%). In urban areas the number of the unemployed increased by 34,000, i.e. by 1.8%, while the number of the employed increased by 75,000, i.e. by 0.8%. At the same time the number of economically inactive persons declined in urban areas (by 68,000, i.e. by 0.8%) as well as in the rural ones (by 28,000, i.e. by 0.6%). As a result of ongoing changes, a disproportion between urban and rural areas in the liability rate of working people by non-working increased.

A significant rate of employment increase in the enterprise sector observed by April 1998 (2.4% compared with the analogous period a year before) started to fall since May 1998 by 0.1 point monthly with weakening of business activity. An increase of average employment in the enterprise sector in the period January to October amounted to 1.9% compared with the analogous period of the previous year and the same growth factor maintained by the end of 1998. However, the increase of employment in 1998 in the enterprise sector as well as the increase of employment in the entire economy has not ensured a reduction of the unemployment rate to the level defined in the Budget Act, i.e. to 10.1%.

A permanent decrease of the unemployment rate had occurred since the beginning of the year reaching in November the rate of 9.9% indicated that it would not exceed 10% at the end of the year. However, in December 207,500 new unemployed were registered and only 119,500 were cancelled from the register and the unemployment rate at the end of 1998 amounted to 10.4%. It is estimated that the growth of unearned income was higher than in 1997, especially interest and dividend yield, and the growth of benefits and social transfers income (especially pensions and disability pensions payments) and current transfers (in 1998 the balance of insurance compensations and premiums was much smaller than in 1997, when the majority of flood related compensations were paid) slower.

As Table 2 shows that people engaged in agriculture, their share in the working population is as compared to the year 1996 has declined by 16% and their share in the total working population in year 2000 is almost 18%, in the industry sector, the number engaged declined by 3.7% as compared to year 1996, and it has about 31% in the

working population registered in year 2000. On the other hand, the number of people working in the service sector compared to the year 1996 increased by 7% with a share of 51% in the working population.

Table 2. Economically active and inactive population in the second quarter of 2000

Specification	Economically active population			Persons economically inactive
	Total	employed persons	unemployed persons	
In thousands				
Total	17343	14518	2825	13193
men	9334	7975	1359	5218
women	8009	6543	1466	7975
Urban areas	10907	9022	1886	8335
Rural areas	6435	5496	939	4858
First quarter of 2000 = 100				
Total	100.8	101.4	98.1	99.3
men	100.8	101.6	96.4	99.0
women	100.9	101.1	99.7	99.4
Urban areas	101.0	100.8	101.8	99.2
Rural areas	100.6	102.3	91.4	99.4

Source: GUS (2000).

In terms of the growth in numbers, there are some occupations that clearly stand out from the rest. In order of magnitude, these are: administrative personnel; household assistants; miscellaneous manual labour; skilled technical and professional personnel; construction workers; salesmen; middle-level technical and professional personnel. Even though the mixture of more skilled occupations with less skilled occupations may surprise readers, in fact it is a characteristic trend of occupational development in advanced societies, as studies carried out in other countries have shown (Markusen and Venabl, 1996).

In its recent development, Polish society started generating high-skill jobs and products with high added value, at the same time as low-level and low-paid jobs which are characteristic of a whole range of labour-intensive services. A more detailed analysis also shows, that the fastest positive rates of change in the recent period have been achieved in occupations which although accounting for a minority of those employed, are linked to rapid modernisation of the economy and society: these are under 'other professional and technical' occupations which include, insurance and real estate agents, stockbrokers, operators at radio and TV stations, and similar occupations.

An observation of the occupations whose share of the total has shrunk in the 1996-2000 period, confirms the above results: the three occupations showing a massive decline in numbers are farm workers, farm labourers and 'other industry workers', i.e. activities linked to the old production structure which is quickly falling apart: in 1995, 126,600; in 1997, 94,900; in 1998 101,800 jobs were lost in these years. While the

number of new jobs generated showed the greatest increase, which shows that the social structure is undergoing a speedy transformation. Within the urban social structure, the sectors in which the number of jobs fell sharply are also highly significant ones. These are the mining and the metal-working industry.

There is a widespread and lively debate under way on how to attain the acceptable level of living standards and goals. In order to be *steady*, the pace of growth must not strain the production capacity of the economy. In other words, the economy cannot sustain for too long a pace of growth that pushes the rate of inflation as well as the public sector and external deficits beyond certain levels. However, the various Polish economic and social agents take rather different views on which are the tolerable levels of such imbalances.⁶

7. Budget deficit

Within general government, the state budget (core central government that is, excluding the social funds and a number of extra-budgetary funds) is responsible for about two-thirds of revenue and gross spending; it is the almost exclusive focus of the domestic fiscal policy debate (Bird and Wallich, 1993). Through the 1990s, it has run a deficit slightly larger than for the overall general government, supporting other small agencies by various types of transfers.

After the large fiscal imbalances associated with the early and most difficult years of transition, Poland achieved a major fiscal turnaround in 1993, through a series of ambitious reforms and a rigorous budget. Since then, the general government deficit has been held consistently below 3% of GDP, compared with close to 7% in 1991.

Besides maintaining the deficit at 2.3% of GDP since 1993 and a primary surplus since 1994, Poland has cut its public debt, while building a substantial government bond market from scratch. It has accomplished difficult reforms of income taxation, indirect taxation, and lately trade taxation; and has recently begun equally key reforms of government institutions and the social security system (pensions, disability, and unemployment).

These achievements have not come easily. At the beginning of this endeavour, the Government that came into office in 1993, while committed to continued stabilisation and reforms, saw its mandate as one of enhancing equity in a more gradually paced transition. This limited its ability to reform the large social spending blocks in the budget: health, education, and pensions; these remain the main impediments to expenditure consolidation.

In 1997, 1998, 1999 (see chart 2 and 4), exports began to grow slower than imports and this trend has continued into the first half of 2000. This favourable development, together with the growth in GDP, kept the current account deficit away from Poland's self-declared danger zone of 6-8% of GDP. The deficit in 1997 amounted to \$4.3 billion – or 3.2% of GDP – which is much better than one can expect. It is also comfortably financed by an increasing inflow of foreign direct investment, which

⁶ The debate over this point is manifested in many public media as well as in the Sejm by various political parties.

amounted to \$6.6 billion in 1997. Even after taking into account the possible impact of the Russian crisis.

The Polish balance of payments includes a large surplus on unclassified transactions on the current account. The trade deficit in 1998 has been only slightly larger than in 1997. Contrary to expectations, the lasting surplus on unrecorded trade with neighbouring countries has hardly decreased. The corresponding surplus on unclassified transactions on the balance of payments offsets the trade deficit for the largest part, and the remaining part is covered by the inflow of foreign direct investment. Data for 1998 shows improvements in the current account (US\$ -2.4 billion from January to August 1998, against US\$ -3.3 billion in the same period of 1997) and a substantial increase in gross foreign reserves (US\$ + 6 billion since the beginning of 1998. Covering the first eight months of 1998, these figures do not take into account the effects of the Russian crisis).

There is a need to resolve problems related to illegal trade, serious under-reporting of the value of imports and corruption. It is estimated that some 25% of trade on the eastern borders, and 15-20% of trade on the border with the EU, goes unrecorded. The 'foreigners law', which came into force on 1 January 1998, introduced stricter controls and visa regulations at Poland's eastern borders, partly in anticipation of the future obligations of EU membership (Sejm, 1998). Although the implementation of the new law was softened in response to the initial confusion and protest of traders, there are indications that truck traffic across some of the eastern borders is increasing and that at least part of the previously unclassified and informal trade might now be officially recorded (Lipton and Sachs, 1990).

8. Balance of payment

The transformation of Poland's balance of payments has matched the dramatic changes occurring elsewhere in the economy. From the very start of transition, Poland has used trade liberalisation to redirect the economy toward a more market-oriented system, and also to bring down inflation through increased import competition (Rutkowski, 1998). Though goods markets were opened to foreign competition, capital market integration has progressed more slowly. Until recently, foreign capital was deterred by Poland's heavy foreign debt burden, as well as by delays in normalising relations with commercial bank creditors.

Poland's balance of payments experience since transition can be divided broadly into three phases. In the first phase, the problem was how best to shore up reserves. With the economy open to foreign trade, but capital inflows negligible, Poland had to build up reserves by generating the current account, at a time when instead of accumulating claims abroad, foreign savings might have been used profitably to help finance the pressing investment needs of transition. The fragile external position also forced monetary and exchange rate policy to be geared in part toward safeguarding the level of international reserves.

The second phase changed in 1994. With surpluses on both current and capital accounts, international reserves became plentiful. Devaluation in late 1993 and rapid growth in productivity had provided a substantial boost to competitiveness, which led

exports to increase by almost 70% over the next two years. The result was a current account surplus (including unrecorded trade) of about 2.8% of GDP in 1994 (Liam et al, 1994). Second, and of greater permanence, successful completion of a Brady-style debt and debt-service reduction (DDSR) agreement in late 1994 paved the way for the return of capital inflows (Calvo, 1993; see also: Gotz-Kozierkiewicz, 1991a).

The third phase was that exchange rate has played a dual role in Poland's stabilisation, at times acting as the main anchor for domestic economic policy, while also being responsive to developments in external competitiveness. For example, as part of the initial big bang reforms, the exchange rate was fixed in 1990 as a means of reducing inflation, a classic nominal anchor approach but only after the external position had been safeguarded by an initial devaluation of almost 50%. Though inflation came down sharply, it still remained well above partner country levels, and international competitiveness worsened. Because of this, and to adjust to the shock of the CMEA collapse, in May 1991 the exchange rate was devalued by 16.8% and pegged to a basket of five currencies (WB, 1992, 1993). This was followed in October 1991 by the introduction of a crawling peg exchange rate system. Since then, the initial 1.8% rate of crawl has been progressively lowered.

Despite the primarily exchange rate-based strategy, the government had also been ready to adjust the exchange rate, both to preserve competitiveness and, when necessary, to restore its nominal anchor role. At first these adjustments were mainly devaluation, prompted by concerns over the weak external position. The foreign debt also has a significant part in the Polish economy. In the 1980s, Poland had the fourth-highest foreign debt in the world, and was unable to service it (Baer, 1995). Debt reduction and rescheduling agreements were reached in 1991 and 1994 with government and commercial creditors, making it possible for Poland to resume debt servicing payments. The debt-servicing burden has lessened and is being steadily reduced by strong export growth: only 10% of earnings from exports went on debt repayment in 1995 compared to 70% (on a due basis) in 1991. Poland has, as a result, regained access to international capital markets.

9. Inflation

Despite the social, political and economic achievements, Poland's economic record during transition has not been without blemish. In particular, inflation has proven more resilient than anticipated and remains significantly higher than in many of the advanced Central and East European economies. Though there was considerable success in fighting inflation in the first year of transition, conditions of near-hyperinflation being brought swiftly under control, subsequent progress has been more modest. In particular, from 1993 to late 1994, inflation remained in the 30% range, in 1999, price indices of consumer goods and services were 7.3% as compared to 1998 (GUS, 1999).

These problems notwithstanding, Poland's record of accelerating recovery has sustained, if somewhat slow and fitful, disinflation testifies to the overall success of its transition strategy. As is well known, this strategy combined wide-ranging external and domestic liberalisation with generally tight financial policies, under a multiple-anchor

approach that included low fiscal deficits, hard budget constraints on enterprises, an incomes policy, and an exchange rate anchor.

Poland's economic recovery started back in 1992, only two years after the big bang of macroeconomic stabilisation and economic liberalisation. At first the recovery was tentative, consumption-led and vulnerable to balance of payments constraints. The recovery strengthened in 1994, led by sizeable increases in exports: the share of domestic demand in GDP fell, and the contribution of external demand to real GDP growth became strongly positive. Sustained rapid increases in productivity, moderate real wage increases, and the lagged effects of devaluation (NBP, 1999).

Throughout Poland's transition, monetary policy has operated with the exchange rate as a key nominal anchor. In 1990, the turnaround from near hyperinflation to inflation below 50% occurred under a fixed exchange rate regime, with high interest rate, a large fiscal adjustment, and the opening of the economy to foreign competition.

The more gradual disinflation since has also been achieved with a largely exchange rate-based strategy. Throughout the 1990s, monetary policy was conducted under a crawling peg arrangement (NBP, 1999), with periodic reductions in the rate of crawl in line with the disinflation objective and several step devaluation to preserve external balance (Pinto *et al.*, 1993).

In practice, the exchange rate has not been the only nominal anchor. The governments have followed a multiple anchor approach to achieve moderate disinflation without jeopardising the recovery and with a view to preserving the external balance. Domestic interest rates and the rate of crawl have generally been geared to the inflation target, while the level of the exchange rate has been set with a view to securing external balance. Fiscal and incomes policies have acted as additional anchors.

Against the impressive growth record of recent years, Poland's inflation performance has lagged somewhat, although hyperinflation has long since disappeared. However, inflation in Poland remains well above the average of its fellow Visegrad countries, let alone the average inflation rate in the European Union. Even so, generally tight financial policies have ensured a continued downward path for inflation, even if immediate progress has, at times, been complicated by undervaluation of the exchange rate or supply side shocks to the economy.

After declining sharply from over 600% during 1989 to 38% during 1993, inflation became stuck in the 10.2% range in 1998 (GUS, 1999). In part, this was because gradual reductions in the rate of crawl were unable to resolve the underlying inflation problem caused by undervaluation of the level of the exchange rate. In addition, part of the explanation lies in the poor harvest: agricultural production fell, and food prices increased.

There has been much debate about Poland's monetary policy in recent years. Although most would agree that the Polish economy has staged a remarkably successful performance, the contribution of monetary policy to this outcome has been more controversial, especially over the past two-three years when views have differed, at times sharply, over the appropriate stance of policies. To some extent, this controversy has reflected the considerable tensions that monetary policy has had to cope with, and which would have strained even the most sophisticated policy

framework. At the same time, there has also been some disagreement about the regime's basic rationale and operating principles. For example, while some have emphasised the fundamental anchor role of the exchange rate, others would focus on the need to control the money supply; and in practice, it seems that neither of those “anchors” was given priority in actual policy implementation.

The 1990s can be characterised by accelerating export-led growth while domestic demand remained subdued; widening current account and overall balance of payments surpluses; and the fuelling of rapid monetary expansion. Not surprisingly, inflation and unemployment did not come down much further in this environment. In hindsight, rapid transition-related productivity growth combined with the August 1993 devaluation had made the zloty progressively undervalued. Once western markets recovered from the recession, this undervaluation induced a growing external surplus that proved difficult to sterilise. The authorities initially were reluctant to appreciate the zloty to contain these pressures, for fear of overvaluation and, on the part of the NBP, a desire to increase NIR. Instead, the NBP relied mainly on sterilisation through open market operations, and exchange rate action was limited to slowing down the rate of crawl. However, a series of cuts in the monthly rate of crawl failed to stem the flood of NIR, and it took increasingly aggressive (and costly) open market operations to hold up interest rates during this period.

10. Competitiveness

The answer to the problem of competitiveness lies, in the first place, with the companies, which have to adjust their business structure, production processes and products to the new circumstances (Skawińska and Zalewski, 1999). That is an extensive field in which there are factors at play such as technological innovation, on-the-job training, improving product quality and design, organising good post-sale services, improving foreign marketing networks (Drew, 1992), for example, participating in willing multinationals, and merging companies in order to become sufficiently large for competing in world markets (Hughes, 1993). That means there is little use for short-term profit, authoritarian management and ostentatious behaviour, which is more fitting to the world of entertainment (Whiteley, 1994).

Another answer to the unequal competitiveness problem in Polish industry is the way in which the public administration handles public expenditure. The growth of this variable will be contained in forthcoming years and that should not take place at the expense of social benefits, public services or the development of the country's infrastructure. How? By taking advantage of the many opportunities for improving management of expenditure, applying suitable criteria in choosing investment projects and adopting consistent objectives (Blanchard *et al.*, 1993). Regarding public enterprises, by efficiently managing those, which are or can become competitive and are a significant industrial asset to the Polish economy, setting them apart from those others which exist for political and social reasons whose cost is to be met under the Government budget.

Another way of improving the competitiveness of the Polish economy is to make sure that the labour market functions more effectively, on which subject the labour

unions must take important decisions, basically on three questions (Tymowska and Wisniewski, 1993). Firstly, on wages, as the competitiveness of some sectors of the economy will be reduced, if real wages grow faster than productivity. Secondly, on the labour market, as more job opportunities will be opened up by doing away with certain rigidities in hiring workers indefinitely and at the same time by avoiding abuse of temporary labour contracts. In the third place, the labour unions will have to choose between sticking to a strategy of confrontation, which is a socially limited approach and cannot be kept up for too long, or taking a negotiating stance in which they are prepared to share responsibilities and to face up to the middle-term problems of the Polish economy.

Finally, the competitiveness and future of the Polish economy depend on important questions which call for a social consensus (Malana, 2000), for example on developing a more suitable taxation system for achieving the objective of optimising steady growth, with citizens and companies accepting the duties democratically imposed on them under the tax laws in force, no matter how unpleasant these are, as the very name in Polish “*narzucać*” means imposition. That would save the shame of having to read things like ‘... it should be noted that a number of Polish companies do not pay the full amount of tax due; and with local knowledge and good accountants there is no reason why foreign resident companies should do either.’⁷

The 1990-1999 period can be summed up in two points:

1. modernisation of the production system through stepped-up investment,
2. irreversible internationalisation of the Polish economy.

The performance of the Polish economy in 2000 can be viewed basically in two different ways: the economy may have been taking a breath and will soon recover and resume strong growth, or the economy may have run out of steam and will only pull slowly ahead with considerable effort. In addition, if Poland accomplishes its goal of belonging to the core of the Monetary Union, it will no longer be able to use, as in the past, zloty devaluations to cushion competitiveness shortcomings. What seems most clear is that in the future, the Polish economy will be increasingly influenced by its integration in what we might call the ‘European economy’ (Tsoukalis, 1993). This concept describes the prevailing economic links and those foreseen in the future among EC countries and also with neighbouring European countries. These are special links, half way between the integration of territorial units in a national economy and the interdependence existing today among the world's major domestic economies.

⁷ *The Economist*, 14 October 2000.

References:

- Baer, H. (1995), 'Debt as a Control Device in Transitional Economies: The Experiences of Hungary and Poland', *Policy Research Working Paper*, 1480, World Bank, Washington.
- Balcerowicz, L. (1993), *Common fallacies in the debate on the economic transition in central and eastern Europe*, European Bank for Reconstruction and Development, London.
- Berg, A. (1993), 'Measurement and Mismeasurement of Economic Activity During Transition to the Market', in: *Eastern Europe in Transition: From Recession to Growth*, World Bank, Washington, pp. 39-63.
- Bird, R., Wallich, Ch. (1993), 'Fiscal Decentralization and Intergovernmental Relations in Transition Economies: Toward a Systematic Framework of Analysis', *World Bank Working Paper*, WPS 1122, World Bank, Washington, March.
- Black, S. (1976), 'Multilateral and Bilateral Measures of Effective Exchange Rates in a World of Traded Goods', *Journal of Political Economy*, University of Chicago, Vol. 84 (June), pp. 615-21.
- Blanchard, O., Commander, S., Coricelli, F. (1993), Unemployment and Restructuring in Eastern Europe, paper presented at the World Bank Conference on Unemployment, Restructuring, and the Labour Market in East Europe and Russia (Washington, October).
- Calvo, G. (ed.) (1993), 'Financial Sector Reforms and Exchange Arrangements in Eastern Europe', *IMF Occasional Paper*, No. 102, Washington, February.
- Calvo, G., Coricelli, F. (1993), 'Output Collapse in Eastern Europe: The Role of Credit', *IMF Staff Papers*, Vol. 40 (March), p. 32;
- CEC (1993), *Trade and Aid in Relations Between the Community, the Countries of Central and Eastern Europe, and the Countries of the Commonwealth of Independent States*, Commission of the European Communities, December.
- Chadha, B., Coricelli, F., Krajnyak, K. (1993), 'Economic Restructuring, Unemployment, and Growth in a Transition Economy', *IMF Staff Papers*, Vol. 40 (December), pp. 744-80;
- Commander, S., Coricelli, F. (1992), 'Output Decline in Hungary and Poland in 1990-1991: Structural Change and Aggregate Shocks', *Policy Research Working Paper*, WPS 1036, Economic Development Institute and the Country Economics Department – World Bank, Washington.
- Drew, J. (1992), *Doing Business in the European Communities*, Whurr Publishers, 3rd edn, London, pp. 46-50.
- Du Pont, M. (2000), *Foreign direct investment in transitional economies: A Case Study of China and Poland*, Macmillan, Basingstoke.
- EBRD (1999), *Annual Report*, European Bank for Reconstruction and Development.

- GATT (1993), *General Agreement on Tariffs and Trade*, World Trade Materials, Geneva, January.
- Gál, K. (1999), 'Bilateral agreements in Central and Eastern Europe: a New Inter-State Framework for Minority Protection?', *ECMI Working Paper*, series no. 4, European Centre for Minority Issues, Flensburg.
- Gomulka, S. (1993), 'Poland: Glass Half Full', in: *Economic Transformation in Central Europe: A Progress Report*, Centre for Economic Policy Research, London, pp. 187-210.
- Gotz-Kozierkiewicz, D. (1991a), 'Exchange Rate, Inflation and Recession', Institute of Finance Working Paper, No. 21, Warsaw, pp. 1-34.
- (1991b), 'The Role and Place of the External Sector in Economic Equilibrium in a Reforming Central Planned Economy in the Short Run', *Soviet and Eastern European Foreign Trade*, Vol. 27, pp. 44-65.
- Gotz-Kozierkiewicz, G. (1991c), 'Fiscal Adjustment and Stabilization Policies in Eastern Europe', *Institute of Finance Working Paper*, No. 24, Warsaw.
- GUS (1997), *Rocznik Statystyczny*, Główny Urząd Statystyczny, Warsaw.
- (1998a), *Rocznik Statystyczny*, Główny Urząd Statystyczny, Warsaw.
- (1998b), *Informacja o sytuacji społeczno-gospodarczej kraju*. Główny Urząd Statystyczny, Warsaw.
- (1999), *Rocznik Statystyczny*, Główny Urząd Statystyczny, Warsaw.
- (2000), *Aktywność Ekonomiczna Ludności Polski*, Główny Urząd Statystyczny, II kwartał.
- Havlik, P. (1993), 'The Influence of Exchange Rates and Wages on Export Competitiveness in Hungary, Poland, and Former Czechoslovakia', *WIIW – Mitglieder information* (11), pp. 3-12.
- Holzer J., Kowalska I. (1997), *Fertility and Family Surveys in Countries of the ECE Region: standard country report – Poland*, United Nations, New York.
- Hughes, K. (1993), *European Competitiveness*, Cambridge University Press, pp. 67-90.
- Isard, P. (1977), 'How Far Can We Push the Law of One Price?', *American Economic Review*, Vol. 67, December, pp. 942-48.
- Kaja, J. (1999), *Polityka gospodarcza. Wstęp do teorii*, Warsaw School of Economics, Warsaw, p. 169.
- Kaminski, B. (1993), 'The Foreign Trade Dimension of the Market Transition in Poland', *Policy Research Working Paper*, WPS 1144, World Bank, Washington, June.
- Koćwin, J. (1999), 'Obszary oddziaływania zagranicznych inwestycji bezpośrednich na gospodarkę Polski w latach 1989-1998', *Polityka Gospodarcza*, No. 2, Warsaw, p. 55.
- Kołodko, G. (2000), *From Shock to Therapy: the Political Economy of Post-socialist transformation*, Oxford University Press.

- (1993), 'From Output Collapse to Sustainable Growth in Transition Economies: The Fiscal Implications', *Institute of Finance Working Paper*, No. 35, Warsaw, June.
- Ksiezopolski, M. (1991), 'The Labour Market in Transition and the Growth of Poverty in Poland', *Labour and Society*, Vol. 16, No. 2, pp. 175-92.
- Lane, T. D. (1991), 'Inflation Stabilization and Economic Transformation in Poland: The First Year', *IMF Working Paper*, 91/70, Washington, July.
- Lenain, P. (2000), 'Poland's Successful Transition', *The OECD Observer*, No. 220, April.
- Liam, E., Chopra, A., Christofides, Ch., Mylonas, P., Otker, I., Schwart, G. (1994), 'Poland, the Path to a Market Economy', IMF Occasional Paper, 113, Washington DC, October.
- Lipschitz, L., McDonald, D. (1991), 'Real Exchange Rates and Competitiveness: A Clarification of Concepts, and Some Measurements for Europe', *IMF Working Paper*, 91/25, Washington, March.
- Lipton, D., Sachs, J. (1990), 'Creating a Market Economy in Eastern Europe: The Case of Poland', *Brookings Papers on Economic Activity: 1*, Brookings Institution (Washington), pp. 75-148.
- Malana, D. (ed.) (2000), *Critical technologies and competitiveness*, Huntington, Nova Science Publishers, New York, pp. 74-83.
- Maret, X., Schwartz G. (1993), 'Poland: The Social Safety Net During the Transition', *IMF Working Paper*, 93/42, Washington, May.
- Markusen, J., Venabl, A. (1996), 'Multinational Production, Skilled Labour, and Real Wages', *NBER Working Paper*; No. 5483.
- Marsh, I. W., Tokarick, S. P. (1994), 'Competitiveness Indicators: A Theoretical and Empirical Assessment', *IMF Working Paper*, 94/29, Washington, March.
- MLSP (1993), 'Poland', *Worker's Pensions*, Ministry of Labour and Social Policy, Warsaw, May.
- NBP (1999), *Inflation Report 1998*, Monetary Policy Council – National Bank of Poland, Warsaw, June, pp. 34-35.
- OECD (2000), *Economic Survey of Poland*, OECD, January.
- Pinto, B., Belka, M., Krajewski, S. (1993), 'Transforming State Enterprises in Poland: Evidence on Adjustment by Manufacturing Firms', *Brookings Papers on Economic Activity 1*, Brookings Institution, Washington, pp. 213-70.
- PlanEcon, *Review and Outlook for Eastern Europe* (various issues).
- , *Trade and Finance Review* (various issues).
- Rollo, J., Smith, A. (1993), 'The Political Economy of Eastern European Trade with the European Community: Why So Sensitive?', *Economic Policy*, Vol. 8 (April), pp. 140-81.
- Rutkowski, J. (1998), *Welfare and the labour market in Poland: Social Policy During Economic Transition*, World Bank, Washington, pp. 34-49.

- Sejm (1998), *Uchwała Sejmu Rzeczypospolitej Polskiej z dnia 20 marca 1998 r. w sprawie członkostwa Polski w Unii Europejskiej*, M.P. 1998 nr 9 poz. 174.
- Shani, M. (1994), *The EC, A Short Guide for Business and the Professions*, Fourmat Publishing, London.
- Skawińska, E., Zalewski, R. (1999), 'Konkurencyjność przedsiębiorstwa rolno-spożywczego w Polsce', *Polityka Gospodarcza*, No. 2, Warsaw, p. 142.
- Stolnitz, G. (ed.) (1992), *Demographic Causes and Economic Consequences of Population Aging: Europe and North America*, United Nations, New York, pp. 178-103.
- The Economist* (2000), October 14th.
- Tsoukalis, L. (1993), *The New European Economy. The Politics and Economics of Integration*, Oxford University Press.
- Tymowska, K., Wisniewski, M. (1993), *Public Health and Social Security, Stabilization and Structural Adjustment in Poland*, in: H. Kierzkowski, M. Okolski, S. Wellisz (eds.), *Stabilization and Structural Adjustment in Poland*, Routledge, New York, pp. 219-42.
- UN (1999), *Population in Europe and North America on the Eve of the Millennium: Dynamics and Policy Responses: Regional Population Meeting, 7-9 December 1998*, Budapest, Hungary, United Nations, New York.
- UNICEF (1993), 'Central and Eastern Europe in Transition: Public Policy and Social Conditions', *Regional Monitoring Report*, No. 1, United Nations Children's Fund, UNICEF International Child Development Center, Florence, November.
- Vlad, S. (1990), *The CMEA in Crisis: Toward a New European Order?*, Praeger, New York:, pp. 43-67.
- WB (1992), *World Debt Tables*, World Bank, Washington.
- (1993), *World Debt Tables*, World Bank, Washington.
- Whiteley, R. (1994), *European Business Systems: Firms and Markets in the National Context*, Sage, London.
- Wolf, T.A. (1991), 'The Lessons of Limited Market-Oriented Reform', *Journal of Economic Perspectives*, Vol. 5 (Fall), pp. 45-58.

Main Issues and Benefits of European Union Enlargement concerning Poland

Marcin Kulikowski

Introduction

The enlargement of the European Union is one of the most important challenges in Europe for the twenty-first century. It is a unique and historic opportunity to further integration of the continent. The enlargement will spread peace, stability and prosperity to all new members of Europe, which has the first chance in its long history to be fully united.

The process of the EU enlargement was formally launched in March 1998. It embraces 13 applicant countries: Bulgaria, Cyprus, the Czech Republic, Estonia, Hungary, Latvia, Lithuania, Malta, Poland, Romania, Slovakia, Slovenia and Turkey.

Enlargement of the EU has a historical and moral dimension because it will bring to an end the division of Europe after the Second World War. The reunification process of Europe began with the unification of Germany.

In this paper I describe issues of the enlargement concerning Poland and especially Polish economy and politics. Poland is the largest and one of the most important candidate countries. Poland will benefit from being a member state of an enlarged Union. The same trade rules, a single tariff, and a single set of administrative procedures will apply not only just across the existing member states but also across the Single Market of the enlarged Union. This will significantly improve investment conditions and trade activity in both. Some of problems are still not regulated, cause tensions or are under discussion. I would like to concentrate on these issues.

1. The benefits of accession

This enlargement will change the face of Europe and will affect all Community institutions and areas of policy. The two underlying strategic aims – projecting political stability and strengthening Europe as an economic power – look set to be achieved.

The benefits of enlargement are already visible. Stable democracy in Poland is current at the best in all its history and is a model for all candidate countries. Systematically, all participating states have such a robust democracy that there is no risk of a relapse into authoritarianism. The credit for this success belongs mainly to the people of those countries themselves. They alone took the decision to follow the difficult path and build open societies, modern democracies and functioning market economies.

The political stability in Poland and Central and East European candidate countries is rooted in common European values – democracy, the rule of law, respect for human rights and the protection of minorities. This reflects an improvement in the security situation in Europe and the opening up of a huge potential for economic development.

Both the existing EU member states and the prospective members benefit equally from political stability. A stable political situation is a condition for peace, good economic results and cooperation.

The enlargement gives Poland and candidate countries an opportunity to increase their living standards and improve their prospects in European competition. The advantages for the member states are already tangible. They run considerable surpluses on their export trade with the candidate countries, and these translate into more jobs, more tax revenue and more money for social security systems.

The enlargement of the European Union will improve its ability to confront the challenges of the new century. The present round of enlargement brings in countries that wish to contribute wholeheartedly to the European project, and will help to shape the institutions and governance of the future Europe (EUO, 2001).

2. Economy

The member states have already concluded, that Poland is a functioning market economy and it should be able to compete with market pressure forces within the European Union. Despite its developing and fast growing private sector, it should proceed with trade liberalisation.

Poland was one of the most successful transition economies over the last decade thanks to consistently sound economic policies. Privatisation has steadily moved forward with most Polish banks and insurance institutions already privatised. In 1999 privatisation of the Polish power sector started and is expected to be completed by 2002. The forthcoming stage of privatisation includes water, railways, steel, copper and coal mining, and the postal service.

The following sectors have been identified as offering good investment or export opportunities: automotive components, IT, telecommunication, electronics, energy production, environmental products and services, food production and processing, financial services, transport and distribution, tourism and security sector.

During the last few years, the macroeconomic situation of Poland has improved. Since 1994 annual GDP growth rates have been over 4.5% and despite the Russian crisis, the Polish economy did not suffer and GDP grew by 4.1% in 1999 and 2000. Provided current macro-economic policy is pursued, such growth should continue. The average annual inflation rate was 7.3% in 1999 and 10% in 2000.

Accelerating domestic demand and external investments caused strong improvement in production output. The substantial problem of the Polish economy concerning accession is a high level of unemployment (over 15%), which is still rising.

The export output has increased but import growth is even more robust, reflecting the rapid increase in domestic demand. The public sector deficit is still increasing and it is partly generated by difficult implementation of four social sector reforms: health care system, education, pensions system and public administration with territorial partition reform.

3. Agriculture

In the EU countries, a whole range of simplifications and stereotypes distorts the image of Polish agriculture and of the Polish countryside. This is disadvantageous, as the manner in which the Polish agricultural sector is viewed in the European Union constitutes an important element in the membership negotiations in this field, and, taking into consideration the political significance of this sector, it also represents an important element of the entire negotiation process.

The lack of discrimination here consists chiefly in forgetting the very high degree of support which the agricultural and food sectors in the European Union have received, which means that they are not the best points of reference either for Poland or for the majority of other countries aspiring to membership in the European Union. In indicating the scale of differences between Poland and the European Union, the dynamic pace of transformations in Poland is under appreciated or entirely ignored.

Basing Polish agriculture on the same instruments of agricultural policy as in the European Union, the liberalisation of trade between both markets could increase agricultural production in Poland and theoretically improve the Polish exchange balance with the European Union.

In next few years the tendency towards a real appreciation of zloty will cease, and simultaneously, within the framework of Agenda 2000, the level of agricultural prices in the European Union is being gradually reduced. This could substantially weaken the competitiveness of the Polish farmers in the EU market (EC, 2000, p. 42).

Even in some sectors with the greatest differences in price levels between Poland and the EU, Polish farmers even without help from the budget of the EU will still be competitive in the European market.

Concerning EU quality standards, Polish agricultural producers will have to make extensive investments to adapt to them, which will entail higher production costs, and Poland's joining the European single market area will be connected with an increase in prices (Jagieliński, 2000).

Polish farmers would lose their competitive strength with other EU farmers if they were to be even partially excluded from the most important EU agriculture support instrument or if allocated production limits were to be set too low. With support from the EU, Polish agriculture could have enormous competitive potential amid other members of the common market (Jelonkiewicz, 2000).

The restructuring of farm organisation saw a decline in employment in agriculture, decreasing over the past years to 18% of total employment in 1999.

4. Free movement of workers

Member states such as Germany, Austria, France, and Belgium claim that the EU expansion will lead to a migration of jobs to the East with its lower labour costs. Frankly speaking, Poland is actually creating jobs in industry in Germany and Britain, two of its key trading partners, because it is running a huge trade deficit, importing far more goods than it exports.

The argument that after accession thousands of workers will go to Western Europe seeking jobs is also a mistake. Now Poland is economically and politically in the

similar situation as Spain and Portugal when they acceded to the EU. And almost nobody went for work to the old member states. The enlargement is not a danger for Western European countries in relation to a job market, it is a rational solution and both sides will benefit mutually (Partridge, 1998).

The EU says there is not enough progress in the adoption of mutual recognition of professional qualifications and adopted legislation. The concept of professional recognition still does not exist in Polish legislation, there are only provisions for academic recognition. Still, according to the European Commission, no concrete progress has been implemented in relation to citizen's rights.

In the field of free movement of workers, steps have been taken to strengthen and improve employment offices around the country.

The enlargement will also bring up problems of free movement of workers also to Western countries and they are afraid of the accession. Some officials of the EU were in agreement with implementing a temporary period for Polish workers, which could be some kind of quantitative restriction on a Polish labour force. Polish negotiators stated that citizens in applicant countries should have the same rights to travel and work and live anywhere in the union as the citizens of the 15 current member states. Free movement is one of the most evident benefits and grounds of membership (EC, 2000, p. 36).

5. Copyrights

The adoption of a new Copyright and Company Law is important, as this is a key piece of the internal market legislation. Less progress has been achieved in the area of company law in the strict sense.

Concerning intellectual property rights, provisions have been implemented that close Polish copyright legislation to EC law. The new law significantly improves stricter protection, however the execution of the law remains unchangeable and is not sufficient. Still in Poland there is huge level of piracy, one of the highest of the candidate countries. In terms of legal protection of databases, also no progress has been achieved (EC, 2000, p. 40).

6. Corruption level

In the intervening period the issue of corruption has jumped up the political agenda and in the public consciousness following the publication of a number of critical reports about Poland.

The reports have different methodological approaches and were prepared from different standpoints, but all points show that the Polish political and business environment is plagued by corruption activity caused by insufficient controls, lack of transparency and ineffective law provisions. The data shows that in 1999 over 650 cases of active and passive corruption have been detected, defined by Polish law.

Poland signed the OECD Convention on Combating Bribery of Foreign Officials in International Business Transactions. It was ratified in September 2000 on the

grounds that a sustained effort would be required to step up the fight against corruption (Apanowicz, 2000).

7. Monetary union

Poland will participate in EMU upon accession. It will need to implement the necessary changes to its institutional and legal framework by the date of accession. Overall, Poland has adopted substantial parts of the EMU-related rules. Necessary legislative adjustments are well identified and are under the preparation process. Remaining legal provisions are being harmonised by the National Bank of Poland.

There are voices in Poland saying that enlarging the euro zone into participating countries would be good idea for integrating them with structures of the EU. However, not all member states are willing to do this. The reason for such a situation is a sustainable growth of the Polish economy, reflected in high inflation and high interest rates. Fast joining the European Union could cause an increase in interest rates among all countries of the EU, which are not prepared for a such change (Rostowski, 2001).

8. Environment protection

Poland has achieved very limited progress in aligning with the EC environmental rules. However, a wide range of environmental laws has been prepared and many of them are already implemented. Poland has not yet adopted implementation programmes in the field of air, waste, water and industrial pollution. Also, the Polish authorities consider that a legal basis (through the adoption of the various acts) is necessary before implementation.

Poland's environmental investments should be much larger than they are nowadays. The investment strategy should focus on the concrete implementation of the EC environmental directives and the execution of selected areas.

The Ministry of Environment needs to be strengthened. At the central level, coordination between ministries needs to be improved for better implementation of the EC environmental policy. Poland should also further develop its monitoring capacity towards environmental programmes execution (EC, 2000).

9. Neighbours issues

EU enlargement, after joining Poland and Lithuania, two countries that surround the Russian enclave of Kaliningrad, would create certain problems. The solution to this problem is being discussed together with the European Union and candidate countries. The Polish government stated it is ready to cooperate and strengthen connections with the Kaliningrad region.

Some newspapers reported that Germany was discussing plans to become the key economic power in Kaliningrad in exchange for cancelling part of Russia's debt to Germany. The solution would be the creation of a special economic zone with a status similar to Hongkong in China. Without any comprehensive solutions after the accession of Poland and Lithuania, Kaliningrad will become a Russian enclave closed

within the borders of EU. Regional cooperation and partnership could be an important element of strategy concerning the Kaliningrad region. All of these ideas concerning Kaliningrad could stay only on the paper, if the nuclear weapon were already installed in this region.

Poland, Lithuania and Ukraine are carrying on dialogue with the democratic opposition in Belarus, trying to restore normal democratic rules in this country (Bielecki, 2001).

Conclusion

The membership of Poland and the other Central European candidate countries in the European Union will close the Post-Yalta chapter in European history once and for all. It will also foster the eastward expansion of the zone of security, stability and good-neighbourly relations now enjoyed in the European Union area. It will therefore provide benefits, which lie in the interests of all of Europe.

Despite the problems and issues, which should be solved, Poland now has a great chance to change its political and economic position in Europe.

It is generally held in Poland that its membership of the European Union will help to speed up its economic development and modernisation as well as to liquidate a civilisation gap between Poland and the countries of the Western part of Europe.

The membership in the EU will be the best guarantee for Poland's democracy. It will ensure the transformation process by consolidating those values that link Poland to the European Union states and the entire Western economic and political-defence system.

Such a membership of the European Union should also elevate Poland's international rank and determine its new place in Europe. This, after all, means participation in Europe's most serious international organisation, which has achieved tangible success in its activities to date and has impressed the world with its effective pursuit of its goals. As is now the case with all the Union's member-states, medium-sized and smaller countries included, Poland will be able to initiate and take common decisions of vital importance to international relations and its national interests – something which would not be possible to the same extent outside the European Union.

Other countries will perceive Poland differently, including its immediate neighbours, from how it has been in the past. They will see that they are now dealing with a member-state of a great political, economic and, in future, possibly also a defensive, bloc. Although it is still not a defence structure, the European Union already constitutes an objectively effective factor counteracting internal threats.

References:

- Apanowicz, P. (2000), 'Będziemy w pierwszej grupie', *Rzeczpospolita*, 24 November 2000.
- Bielecki, J. (2001), 'Ucywilizować czarną dziurę', *Rzeczpospolita*, 9 January 2001.
- European Commission, (2000), *Regular Report on Poland's progress towards accession*, Brussels.
- EUO (2001), The European Union Online , www.europa.eu.int, March.
- Polish Main Statistical Office, (2001), www.stat.gov.pl, March.
- Jagieliński, R. (2000), 'Bitwa o handel rolny', *Rzeczpospolita*, 12 June 2000.
- Jelonkiewicz, W. (2000), 'EU: No Subsidies for Polish Farmers', *The Warsaw Voice*, 18 June 2000.
- Ministry of Foreign Affairs of the Republic of Poland (2001), www.msz.gov.pl, March.
- Partridge, B. (1998), *EU Enlargement Will End 'Unjust Division of Europe'*, Radio Free Europe, 13 November 1998.
- Rostowski, J. (2001), 'If Parents Won't Let the Euro Grow Up', *The Wall Street Journal Europe*, 16-17 March 2001.

Part 3

Economic Policy and Growth within Visegrad Countries

The Synchronisation of the Polish Business Cycle

Krzysztof Piech

This paper studies the synchronisation of Poland’s business cycle with others. It aims to discover the existence and measure the strength of this synchronisation, using various approaches. The main conclusion is that the Polish business cycle (precisely speaking: growth cycle, while all the calculations base on growth rates instead of nominal values) shows synchronisation with British-American cycles as well as with some CEE countries’ cycles.

Analysis conducted by Piech (2001) has shown that among over 150 countries, several were characterised by a course of business cycles similar to the Polish one in the period 1970-2000, which could be explained by logical analysis. It indicated that a Polish business cycle showed much synchronisation with the American one. The US economy influences the growth of the United Kingdom and other countries, which in turn influence the Polish business cycle. Later in this paper I will study further relations between the economies of Poland and other countries, especially during the last few years.

1. The Synchronisation of the Polish business cycles in 1992-2000

GDP was chosen as the most universal measure (or approximation) of the business cycle. The growth cycle, instead of the classical business cycle, was chosen as a basis for the analysis. The first is based on the GDP pace of growth, while the second is based on the accumulated value of growth.

For Poland and other post-socialist countries it is important to analyse the last few years, instead of concentrating on the whole period of the last three decades. Taking the sample of over 150 countries, a few relations can be found, which are significant (at 5% level), from the statistical point of view in the period 1992-2000. The correlation coefficient was significant in 27 cases (20 of them were presented on table 1), from which 22 cases accounted positive statistical relations.

Table 1. Correlation coefficients between real GDP of Poland and countries most similar to it in this field in 1992-2000

Bhutan	Kenya	Mongolia	Barbados	Estonia	Côte d’Ivoire	Slovak Rep.	Georgia	South Africa	Armenia
0.904	0.821	0.811	0.804	0.804	0.796	0.781	0.760	0.758	0.752
Swaziland	Lithuania	Latvia	United Kingdom	Bolivia	Zimbabwe	Croatia	Kiribati	Philippines	Finland
0.750	0.746	0.740	0.706	0.693	0.692	0.690	0.682	0.680	0.675

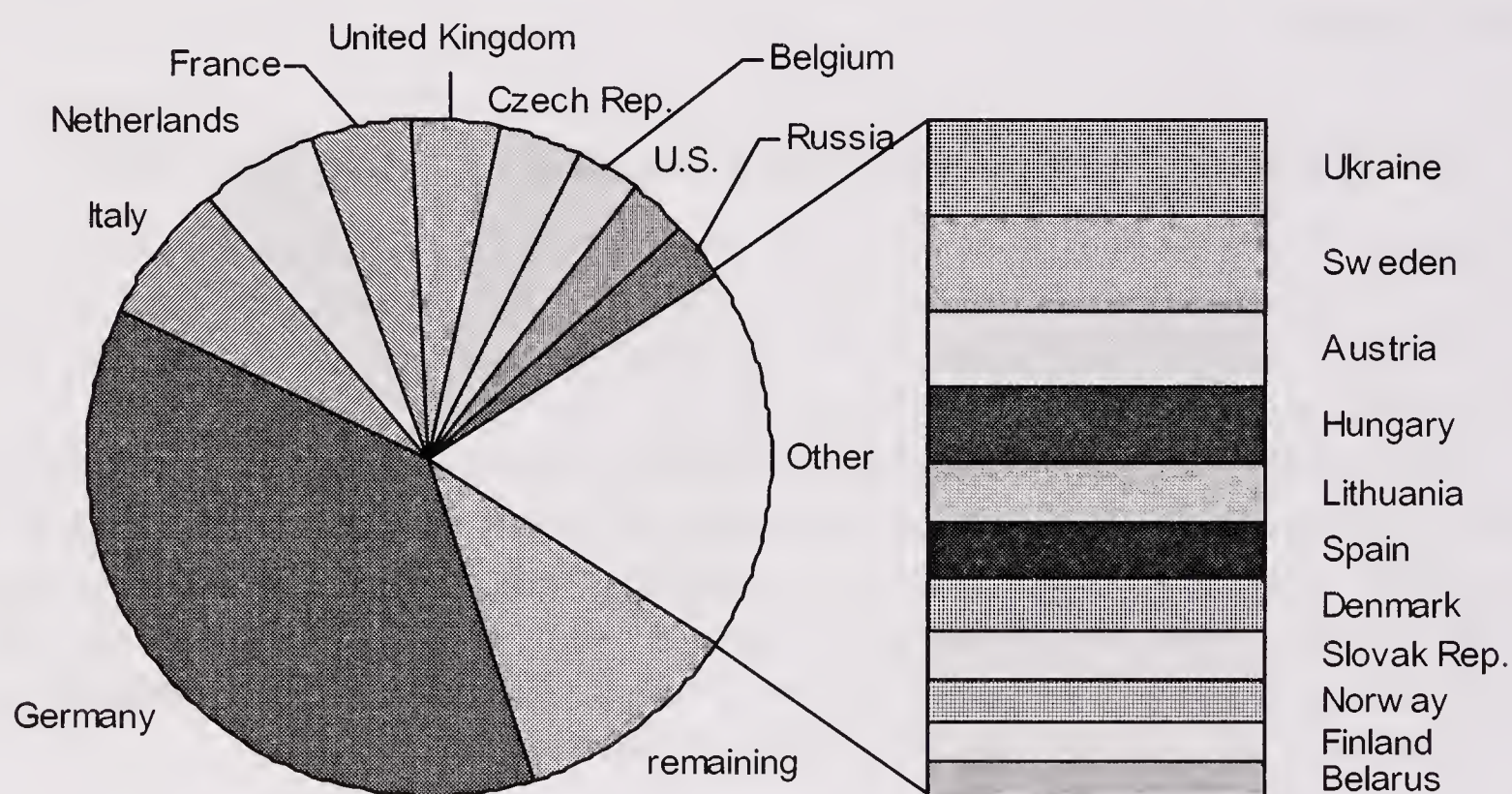
Source: own calculations based on IMF (2001).

The results indicate the existence of ‘apparent synchronisation’ (as in Piech, 2001), because there are no economic relations between Poland and e.g. Bhutan etc. This could be caused by using too short a time series. Additionally, the similar course of development of transition countries caused the phenomenon that many countries show their similarities of business (growth) cycles. That is why this approach, based on data mining rather than seeking for logical (economic) relations, should be overruled and another research approach should be used.

2. Synchronisation of the Polish business cycle, according to the share in exports

Instead of data mining, countries could be chosen, which can have an influence on the Polish economy, e.g. by the real channels (of course, it should not be excluded that Poland could have relations based on a financial channel). Thanks to this approach, a part of ‘apparent correlation’ can be rejected. The trade channel was chosen, and more precisely – the destination of Polish exports.

Figure 1. Structure of Polish exports to the 20 main export partners (as in 1999)



Source: GUS (2000).

3. The synchronisation of cycles of Poland and its main trade partners in the period 1970-2000

It was verified that the business cycle of the 20 largest (as in 1999) Polish export partners could have had influence on the Polish business cycle in the period 1970-2000.

This approach does not stress the importance of the period after the transformation crisis, which is more important for the present situation of Polish and other CEE

economies. Because the number of countries is relatively small (in comparison to the previous, where over 150 countries were considered), the Hodrick-Prescott Filter (1980) can be used – results in table 2.

Table 2. The correlation table of deviation of the real GDP from the trend counted with the use of HP Filter (1970-2000) for Poland and its 20 largest export partners

	Germany	Italy	Netherlands	France	United Kingdom	Czech Rep.	Belgium	US	Russia	Ukraine	Sweden	Austria	Hungary	Lithuania	Spain	Denmark	Slovak Rep.	Norway	Finland	Belarus
Ge	1.00																			
It	0.66	1.00																		
Ne	0.74	0.75	1.00																	
Fr	0.65	0.74	0.62	1.00																
UK	0.32	0.40	0.33	0.40	1.00															
Cz	-0.17	0.15	0.16	0.13	0.40	1.00														
Be	0.66	0.82	0.70	0.81	0.37	0.10	1.00													
US	0.47	0.35	0.51	0.30	0.68	0.27	0.29	1.00												
Ru	0.35	0.18	-0.05	-0.18	-0.26	-0.18	0.11	-0.66	1.00											
Uk	0.15	-0.06	-0.04	-0.06	-0.30	-0.57	-0.05	-0.20	0.57	1.00										
Sw	0.27	0.65	0.40	0.53	0.11	0.31	0.60	-0.01	-0.10	-0.27	1.00									
Au	0.60	0.54	0.53	0.61	0.18	-0.08	0.44	0.07	0.05	0.03	0.35	1.00								
Hu	-0.25	0.06	0.06	0.15	0.38	0.56	0.07	0.18	-0.56	-0.51	0.20	-0.04	1.00							
Li	0.16	0.13	0.10	0.05	-0.01	0.01	0.14	-0.12	0.57	0.30	0.09	0.12	-0.13	1.00						
Sp	0.37	0.46	0.42	0.62	0.44	0.17	0.58	0.34	0.21	0.05	0.26	0.39	0.06	0.24	1.00					
De	0.51	0.36	0.45	0.29	0.61	0.11	0.46	0.54	-0.10	-0.29	0.19	0.35	0.01	0.11	0.21	1.00				
Sl	-0.12	0.19	0.26	0.22	0.42	0.91	0.19	0.29	-0.25	-0.58	0.38	0.02	0.67	0.20	0.29	0.19	1.00			
No	0.04	0.14	0.18	-0.23	-0.07	0.08	-0.01	0.11	0.03	-0.15	0.21	0.22	-0.17	0.13	-0.01	0.41	0.12	1.00		
Fi	0.08	0.42	0.23	0.47	0.48	0.65	0.43	0.23	-0.22	-0.38	0.66	0.24	0.56	0.14	0.40	0.20	0.74	0.01	1.00	
Be	0.09	-0.07	0.08	-0.06	-0.17	-0.50	-0.02	-0.10	0.38	0.73	-0.23	0.09	-0.25	0.48	0.11	-0.14	-0.30	0.00	-0.16	1.00
PL	-0.05	0.18	0.30	0.04	0.55	0.50	0.08	0.44	-0.52	-0.31	-0.07	0.04	0.41	-0.06	0.11	0.30	0.50	0.13	0.22	-0.20

Notes: data for the Czech and Slovak Republics are the same for the period 1970-92, due to the lack of separate data for the two republics of Czechoslovakia. Highlighted are the correlation coefficients statistically significant at a 5% level, underlined – at a 10% level. Source: own calculations based on: IMF (2001) (for Czechoslovakia: IMF, 1999).

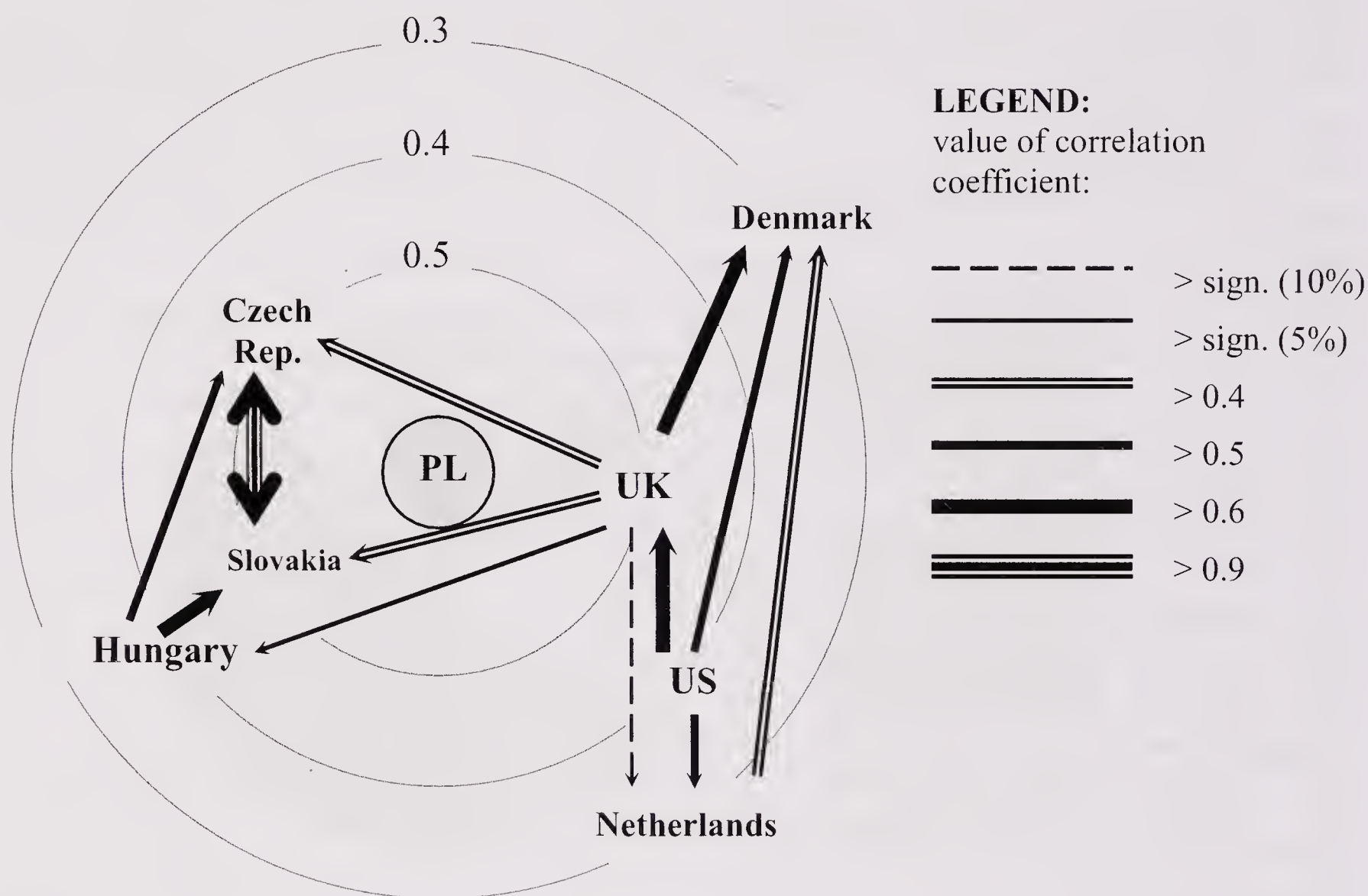
The results show that the Polish business cycle in 1970-2000 was similar to the United Kingdom, the Slovak Republic (and Czech Republic)¹, the United States and Hungary, and also to the Netherlands and Denmark. Interesting are the results showing

¹ Counting correlation for the Czech Republic and Slovakia with Poland after the division of Czechoslovakia there were non-significant values received: 0.194 and 0.461 respectively, but after the transformation crisis in these countries (since 1994), it was: 0.248 and **0.974** respectively (last figure – significant value).

no cycles' relations between Poland and its main trade partner – Germany. It could mean that the increase of economic growth rate in Poland's western neighbour did not have an influence on its rate of GDP growth in 1970-2000. Similar conclusions can be drawn from the cases of Italy and France.

There can be a few reasons for this fact. The most important is the choice of method, which is not perfect. The second is the change of the economic system, and with it – trade relations. Additionally, the 'apparent correlation' could have appeared. Thus, the relations between other countries should be taken into consideration. Some of these relations (with the countries which were the strongest connected with Poland) were shown in the graphic form (fig. 2).

Figure 2. Gravitation picture of business cycle synchronisation of chosen countries (1970-2000)



Notes:

Relations show base on significant values of correlation coefficient; most of them are significant at 5% level (one – at 1%).

Arrows indicate the likely direction of relation.

Relations between Poland and other countries were shown in the form of distance from the centre (Poland), approximated by correlation coefficients values (instead of arrows).

Source: own elaboration based on: table 2.

The distance from Poland shows (fig. 2) the strength of linkages between the business cycles (measured by the value of correlation coefficients between them). The arrows show the likely (because correlation is not able to judge it) direction of the flow of conjuncture impulses.

There can be a quite clear distinction between two groups of countries shown (fig. 2), which are interlinked with each other. It concerns the region of CEE countries and Western Europe with the United States, too. The Polish business cycle has a similar course as those two groups. As we can see from the picture, there is the 'apparent synchronisation' of the Polish and Danish business cycles, because the latter shows significant relations with the United States and the United Kingdom. It is also justified by the small trade exchange between Poland and Denmark, which is too small to be able to influence the course of the business cycle of Poland. A similar situation can be in the case of the Netherlands, however, Polish exports to this country are larger (than in the case of Denmark), and also the size of a Dutch economy is much larger, than the Danish one. Poland also shows a similarity to Czechoslovakia and the countries that emerged after its split (especially to Slovakia), but the direction of the relations should be rather from Poland, than to it. However, the likeliness can be caused by similar, although quite independent, economic changes in both countries (due to the transition process).

3.1. Lagged synchronisation in the period 1970-2000

To verify the possibilities of the influence of other countries on the Polish economy the next year, proper correlation coefficients were calculated. It is justified by the rules of the economic phenomena: the influence of one country upon another does not have to be seen in the same year, but may also influence the economy later or the influence may begin later, e.g. one year. Such a delay was studied further in this text. Without presenting the whole correlation table a few results will be shown.

The statistically significant (5%) values of correlation coefficient were obtained for: Poland (0.433), Austria (-0.389), Sweden (-0.377) and the UK (0.370). It means that the pace of economic growth of Poland (or more exactly: the value of the deviation of trend obtained with the use of HP filter, as it was used again in this exercise) was positively influenced by the pace of growth of Poland and the UK in the previous year. Although it could be quite obvious that last year's economic situation of Poland significantly influenced its performance in the following year, the results obtained for the UK are still surprising.

The conclusion for the economic policy in Poland is that the policy makers should analyse not only the past economic condition of Poland in the previous year, but also (although to smaller extent) the situation in the UK. Again: it does not mean that the UK is the only country which could influence the Polish economy one year later, but regarding the countries connected with trade linkages with Poland and with themselves, the UK shows the largest similarities.

The influence of Austria and Sweden can be negative, but the connection should be explained also by factors different from Polish trade (because of their small share in Polish foreign trade).

3.2. Rolling correlation in the period 1970-2000

The presented calculations concerned a very long period – 31 years. The changes during this period can be checked, analysing shorter subperiods. To achieve this, the technique of rolling correlation was adapted. It enabled analysis of the so-called problem of stationarity of the time serie.

Table 3. Correlation coefficients between deviation of HP trend for real GDP of the largest receivers of Polish exports (9-years periods during 1970-2000)

	Germany	Italy	Nether-lands	France	UK	Czech Rep.	Belgium	US	Sweden	Austria	Hungary	Spain	Denmark	Slovakia	Norway	Finland
1974	0.01	0.04	0.20	-0.05	-0.24	-0.07	-0.08	0.07	-0.54	-0.10	0.03	-0.30	-0.04	-0.05	-0.04	-0.82
1975	0.11	0.14	0.30	0.03	-0.29	-0.20	0.02	-0.10	-0.30	0.06	0.49	-0.55	-0.06	-0.19	-0.11	-0.57
1976	0.20	-0.01	0.33	-0.11	0.25	-0.27	-0.03	0.32	-0.71	0.03	<u>0.63</u>	-0.14	0.25	-0.28	-0.23	<u>-0.60</u>
1977	0.35	0.20	0.51	0.13	0.42	0.52	0.27	0.32	-0.32	0.28	0.26	0.23	0.48	0.51	0.01	-0.30
1978	0.46	0.32	0.61	0.13	<u>0.59</u>	<u>0.58</u>	0.27	0.48	-0.27	0.27	0.17	0.39	0.42	0.58	0.09	-0.31
1979	0.52	0.23	<u>0.59</u>	0.06	0.79	0.57	0.14	<u>0.62</u>	-0.28	0.30	0.13	0.43	0.53	0.57	0.10	-0.26
1980	0.72	0.44	0.71	0.26	0.90	0.50	0.26	<u>0.62</u>	-0.26	0.43	0.11	<u>0.62</u>	<u>0.60</u>	0.49	0.09	-0.25
1981	0.67	0.38	0.72	0.08	0.90	<u>0.61</u>	0.14	<u>0.59</u>	-0.26	0.38	0.17	<u>0.62</u>	<u>0.61</u>	<u>0.60</u>	0.06	-0.10
1982	<u>0.65</u>	0.39	0.75	0.05	0.92	<u>0.66</u>	0.30	0.55	-0.14	0.31	0.06	<u>0.61</u>	0.70	<u>0.66</u>	0.07	0.07
1983	0.57	0.40	0.69	0.00	0.91	0.68	0.27	0.52	-0.05	0.51	0.15	0.49	<u>0.66</u>	0.68	0.44	0.21
1984	<u>0.63</u>	0.42	0.68	0.12	0.90	0.74	0.34	0.54	-0.10	<u>0.60</u>	0.20	<u>0.65</u>	0.60	0.75	0.23	0.22
1985	0.67	0.68	0.70	0.32	0.84	0.74	0.43	0.44	<u>0.61</u>	0.72	-0.06	<u>0.62</u>	0.40	0.75	0.37	0.46
1986	-0.18	0.36	0.19	-0.08	0.77	0.51	-0.14	0.53	0.21	-0.14	0.29	0.18	0.06	0.55	0.27	0.48
1987	-0.84	0.19	0.00	0.14	0.87	0.67	-0.05	<u>0.60</u>	0.45	-0.28	0.69	0.20	0.24	0.68	0.05	0.72
1988	-0.81	0.51	0.07	0.34	0.79	<u>0.65</u>	0.31	<u>0.59</u>	0.42	-0.34	0.74	0.26	0.21	<u>0.65</u>	0.01	0.70
1989	<u>-0.65</u>	0.21	-0.03	0.15	0.78	<u>0.67</u>	0.05	0.88	0.29	-0.44	0.77	0.07	0.19	<u>0.63</u>	0.02	<u>0.66</u>
1990	<u>-0.65</u>	0.19	-0.09	0.20	0.77	<u>0.67</u>	0.07	0.87	0.33	-0.44	0.81	0.07	0.14	<u>0.63</u>	-0.06	0.67
1991	<u>-0.66</u>	0.25	-0.19	0.20	0.75	0.69	0.09	0.81	0.37	-0.47	0.80	0.05	0.09	<u>0.64</u>	-0.08	0.69
1992	<u>-0.66</u>	0.20	-0.16	0.15	0.74	0.69	0.03	0.80	0.32	-0.46	0.82	-0.05	0.15	<u>0.65</u>	0.01	0.69
1993	-0.73	0.12	-0.15	0.03	0.77	<u>0.66</u>	-0.05	0.80	0.29	-0.53	0.82	-0.13	0.19	<u>0.65</u>	0.26	0.68
1994	-0.81	0.04	-0.40	-0.19	0.79	<u>0.63</u>	-0.19	0.78	0.24	-0.69	0.79	-0.30	0.31	<u>0.62</u>	0.49	<u>0.64</u>
1995	-0.69	0.14	-0.06	-0.01	0.83	0.88	-0.04	0.84	0.35	-0.51	0.87	-0.14	0.28	0.86	0.34	0.79
1996	-0.45	0.03	-0.28	-0.45	0.46	0.50	-0.14	-0.16	0.07	-0.19	0.45	-0.23	0.32	<u>0.61</u>	0.71	0.35

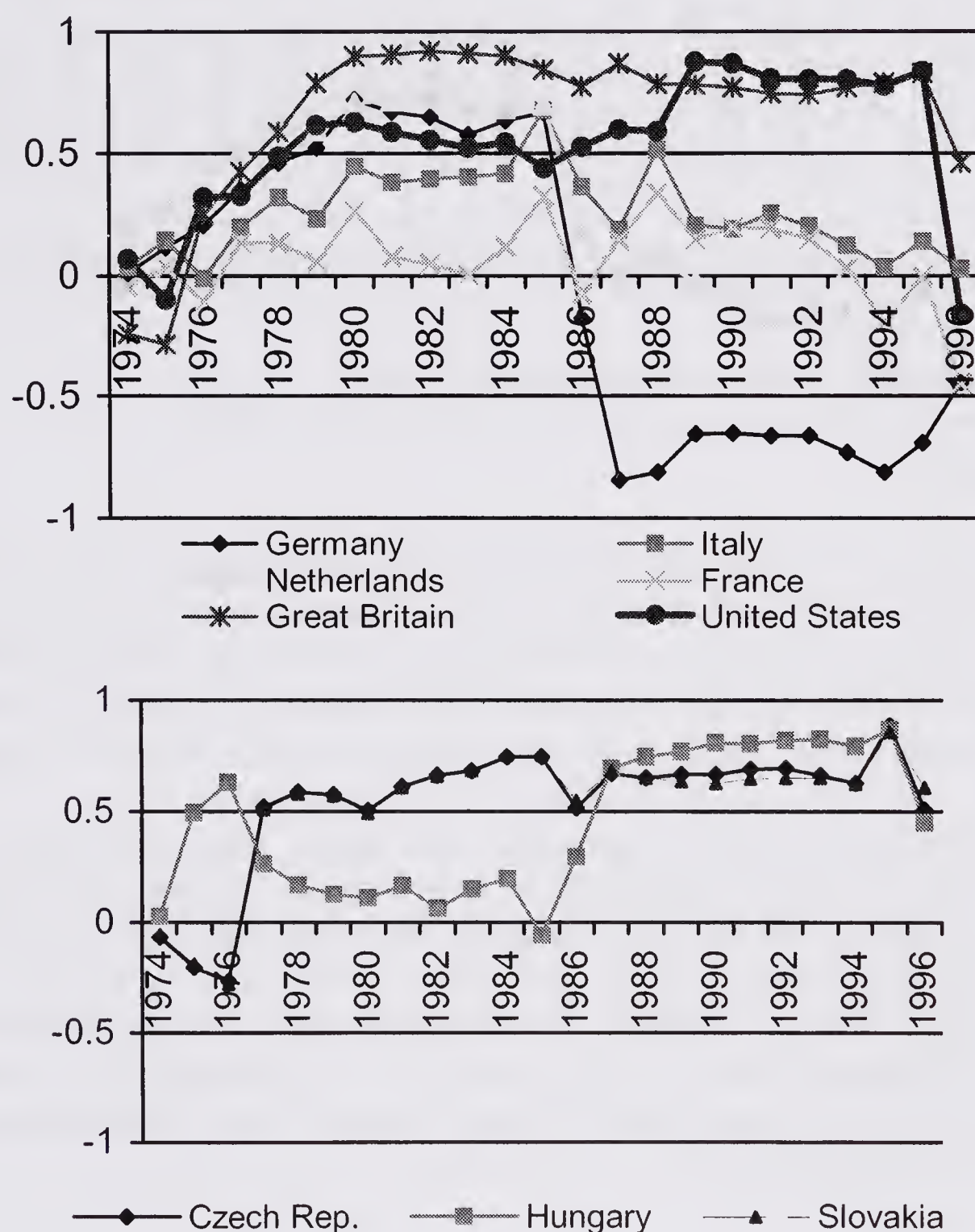
Notes: The years indicate the middle of the period (e.g. 1996 means the period 1992-2000). Other notes and sources: as in table 2.

The above results can be presented in a graphic form, choosing the most important countries (from the point of view of strength of correlation) as shown in figure 3.

Quite clear is the growing strength of correlation coefficients between deviation of the trend of real GDP for Poland and a sample of the most industrialised countries (apart from France) in 1970s and their stabilisation (usually at an insignificant level –

apart from the UK and the Netherlands) in 1980s. However in the 1990s the situation changed. The correlation with the United Kingdom and the United States remained high. It decreased in other cases, and for Germany had negative values (often statistically significant). It means that the opinions of some economists about the influence of the German economy on the Polish one are not supported by the results of quantitative methods. There was also a high correlation between Poland and Hungary and between Poland and Czechoslovakia (after 1992: the Czech and Slovak Republics) in 1990s.

Figure 3. Dynamics of correlation coefficients for 9-year periods in 1970-2000 between deviations of HP trend of real GDP of Poland and its largest receivers of export



Notes and source: see table 3.

The strength of correlation linkages have changed (fig. 3), in some cases greatly and for the Polish present situation the most important are those of the last years (after the transformation crisis). Thus, the course of rolling correlation in the last few years should be analysed. Taking into account only the last 9-year long period, does not

guarantee the best results, due to the existence of ‘apparent correlation’ (see: table 3). This period was characterised by huge variations in the results. These could be caused not by external factors, but primarily – by internal, due to the rapid and deep changes in economic structure during the transition process. During the last few years, a significant influence of the external situation could be observed in Poland, especially in the fourth quarter of 1998 and in the first quarter of 1999 (impact of the Russian crisis), and at the end of 2001 with 2002 (the world recession). Thus the arithmetic average for the last three periods was counted (from table 3), i.e. 1990-98, 1991-99, 1992-2000, which covers the whole 1990s period (see: table 4).

Table 4. Average correlation coefficients between deviations of HP trend for real GDP of the largest receivers of Polish exports in last three 9-years periods

Germany	Italy	Netherlands	France	UK	Czech Rep.	Belgium	US	Sweden	Austria	Hungary	Spain	Denmark	Slovakia	Norway	Finland	Belarus*	Lithuania*	Russia*	Ukraine*
-0.65	0.07	-0.25	-0.22	0.69	0.67	-0.12	0.49	0.22	-0.46	0.70	-0.22	0.30	0.70	0.51	0.59	-0.29	0.18	-0.18	-0.55

Notes:

The strongest (positive) values of coefficients are in bold.
* average for last two periods (because of the lack of data for 1990).

Source: as in table 3.

We can observe that there are similarities between business cycles of Poland and of Hungary, Slovakia, the Czech Republic and the United Kingdom. The synchronisation for Finland might be apparent. Calculating the correlation coefficients of Finland’s business cycles with others for the period 1992-2000 have verified it. It appeared that the largest (significant) values were for Slovakia (0.92) and the United Kingdom (0.82).²

Attention should be paid to Germany once again. The coefficients had negative values. With such a large importance of this country, as the main trade partner of Poland, it could mean, that the lower (higher) the rate of real GDP growth in Germany is, the higher (lower) it is in Poland. Of course, the results of correlation counts do not indicate the logical linkages between the two phenomena, and the data obtained might be a result of different internal changes: unification of Germany and transformation in Poland. Anyway: there is no positive relation between Poland and Germany in terms of business cycle correspondence.³

² Further results: Lithuania (0.79), Sweden (0.73), Denmark (0.73), Spain (0.71), Italy (0.68), and at the 10% significance level: France (0.64) and Hungary (0.6).
³ Although Germany is the country often taken as a basis for analysing the business cycle synchronisation within the EU. See: Artis and Zhang (1997).

4. Conclusions

Poland's economy opens increasingly more during the transition period, as other countries. It also assimilates with EU economies. This trend should have had an impact on the business cycle synchronisation of Poland and other countries. The Polish economy during the last decade shows the largest correspondence of its business cycle with the United Kingdom (and the United States), as well as with other Visegrad-4 countries (Hungary, Slovakia and the Czech Republic).

References:

- Artis, M. J., Zhang, W. (1997), 'International Business Cycles and the ERM: Is there a European Business Cycle?', *International Journal of Finance and Economics*, no. 2, pp. 1-16.
- GUS (2000). *Rocznik statystyczny handlu zagranicznego 2000*, Warsaw.
- Hodrick, R., Prescott, E. (1980), 'Post-War U.S. Business Cycles: An Empirical Investigation', *Discussion Paper*, no. 451, University of Warwick.
- IMF (1999), *World Economic Outlook Database*, October.
- (2000a), *World Economic Outlook Database*, September.
- (2000b), *Direction of Trade Statistics Yearbook 2000*, Washington.
- (2001), *World Economic Outlook Database*, May.
- Jagiello, D., Mietiulka, T., Przybylska, A., Wódkowski, Ł. (2002), 'Systemic Transition and Integration of Central and Eastern European Economies', in Piech, K. (ed.), *European Economy: Opportunities of Change*, The Knowledge Institute, Warsaw, pp. 29-40.
- Piech, K. (2001), *Światowe recesje i polityka antykryzysowa a gospodarka Polski*, Warsaw School of Economics, Warsaw (Ph.D. dissertation).

Macroeconomic Development of Slovakia during the Transition Process

Gabriela Revilakova

The chronology of the Slovak development examines alternative approaches to the understanding of economic policy and the process of transition. This section focuses on the results achieved at the macroeconomic level and as seen in the function of policies. The period of 1990-1999 is divided into several stages and supplemented with some characteristic features of the individual stages:

- the period of initial stabilisation 1990-1992,
- the reversal and revitalisation stage 1993-1995,
- disbalanced growth stage 1996-1998,
- equilibrium recovery 1999-2000.

1. The period of initial stabilisation 1990-1992

During the early stages of reform transition, the decision-making sphere in Czechoslovakia chose the method of so-called “shock therapy“. The decision was influenced by economic neo-liberalism. The reform steps should have been implemented immediately because of the likelihood of a transition trap, i.e. a situation where the rules of the communist-type economy are already weakened but not fully functioning and economy is at the bottom.

In 1990, a transition scenario was developed. A significant number of prices were liberalised on 1 January 1991. It was important that the first reform step gave preferences to stabilisation, to the establishment of equilibrium, to hinder inflation, and to eliminate state budget deficits. The success of that stage was measured by the fact that the shock of inflation could be stopped in a way compatible with a market based economy, e.g. by openly raising prices. The weakening of the economy's performance, the growth of unemployment rates, and the reduction of real wages have demonstrated its failure.

Anti-inflationary actions of the government were in the form of a restrictive monetary and budgetary policy that enabled a gradual stabilisation of price levels. The policy fiercely suppressed the economy. It resulted in either companies or households being unable to implement the necessary structural changes because of their adverse revenue situations. A reduction of production was expected but underestimated. The cumulative drop of GDP in Slovakia between 1989 and 1993 when the transition-related depression came to an end, was about 25%. This decrease was comparable with what was experienced in the Czech Republic, Poland, and Hungary. It was also less than the decline of GDP in a majority of less developed post-communist countries.

2. The reversal and revitalisation stage 1993-1995

A “Strategy of economic revival” was adopted in November 1992. The major points of this strategy were:

- stimulation of macroeconomic expansion by relieving fiscal and credit policy;
- an active trade policy that included support of exports to European countries and CIS (Community of the Independent States);
- restructuring of industry under the leadership and financial assistance of the state.

There were signs as early as 1992 that the bottom cusp of transition-related depression and subsequent revitalisation had been achieved. The most important influence was arguably the establishment of a new state even though it caused a temporary recurrence of economic problems. The World Bank (1995) and I. Miklos (1993) – Slovak deputy prime minister for the economy – noted that the recurring macroeconomic instability and the unavoidable economic drop in 1993 were economic consequences of changing the legal form of the state.

Declines in GDP generation in 1993 were at a milder pace. From a macroeconomic viewpoint, the subsequent period of 1994 and 1995 can be determined, with a certain caution, to be the most successful to date.

The 1994 revitalisation of Slovakia was achieved exclusively through the growth of exports. Slovakia’s structural weakness of having an excessive proportion of semi-products then became an advantage for quickly overcoming the recession. But the trade in such products is dependent on prosperity.

Revitalisation from the outside gradually translated to re-growth of additional GDP components. The remaining problem was that domestic demand grew faster than GDP and caused a strong growth of imports. Slovakia did not seize the opportunity offered by revitalisation to implement necessary structural and institutional changes.

3. Disbalanced growth stage 1996-1998

During this period, economic policy gave preference to high growth rates and ignored institutional change requirements. There was no pronounced success in restructuring the economy and no completion of transition-related steps. It ignored and underestimated the potential of imbalances to produce questionable outcomes.

In 1996, macroeconomic development was seen as a breakthrough year. In the presence of high economic growth, there were still problems of both internal and external imbalances, requiring marked interventions. The major reason for the macroeconomic disbalance was excessively expansive fiscal policy.

The tendencies for imbalances fully manifested themselves in 1996, due to a pronounced contribution of fiscal policy. The policy provided a marked expansion of expenditures to cover the end-consumption by state administration along with a strong growth in capital investments, with an extraordinary portion allocated by the state.

The imbalance between domestic demand and GDP generation was shown by a disturbance of external equilibrium, while the impact on prices was substantially less.

We can say that changes in economic policy priorities after 1995, to the benefit of growth and to the detriment of equilibrium, became clearly reflected in the

macroeconomic development. The high growth rates of the period were forced and some manifestations of imbalance were no more acceptable during the subsequent development.

4. Equilibrium recovery stage 1999–2000

There was a significant change in transition process concepts towards the end of 1998. Efforts spent to eliminate the macroeconomic imbalance could not be sustained, even at the cost of temporarily weakening economic growth.

The pillars of economic growth were defined as first, a new institutional framework, and second: a restructuring and improvement of competitiveness of the corporate sector.

4.1. Short-term consequences of the stabilisation operation

Experience from the stabilisation operation (short-term aspect) suggests that one of the goals of the economic policy, namely diminishing of external imbalance, will obviously be achieved. This goal is connected with an improvement of the domestic demand (ratios of GDP increase), and of proportions between savings and investments. There is some dispute concerning the price to be paid for the reestablishment of equilibrium, being some negative trends of other parameters such as unemployment, GDP growth rates, or inflation rates. Economist Ivan Miklos considers a temporary worsening of some parameters as an unavoidable consequence of the previous development, and prefers establishing equilibrium and institutional changes warranting the growth of the economy at a higher quality level.

4.2. Overview of the Slovak Republic economy development in 2000

The economy development in the Slovak Republic in 2000 was strongly influenced by politics. In December 1999 the decision made by the European Council summit in Helsinki opened the negotiations on Slovakia entry to the European Union. The Slovakian government, in response to the challenge and also upon the needs of the economy itself, speeded up the reforms concluding the Slovak economy transition into a fully functional market economy. The reforms were, more than in the preceding years, oriented to changes in the institutional environment, for the restructuring of banks and company sector, for completion of the privatisation, all that with the intention to ensure a sustainable and irreversible reforming process.

In line with the measures adopted in 1999, the economic policy continued also in the year 2000 in improvement of macroeconomic equilibrium. Its direct impact lowering real wages and increasing unemployment, represented one of the sources of social and political tension that led to the referendum on early parliamentary elections. Although, the outcomes of the Autumn 2000 referendum allowed the government to continue the economic policy reform process.

The recorded GDP rate of growth in the year 2000 (analogously to 1999) was achieved by the combined influence of two circumstances. One of them was the

economic policy supporting the balance recovery and acting on behalf of the reforms (expect for other, including also several stages of still adequately powerful dynamism aligning regulated prices towards their market-balanced level). Secondly, it was the factor of a future development and probably also the culmination of the prospering world economy. Thanks to the interaction of the above described factors, the rate of GDP growth in 2000 was rather low, although it still ended up in the positive value of 2.2%. A combination of the positive influence of the factors mentioned in 2000 reflected also in an ongoing decline of the foreign trade balance deficit.

Data on parameters and outcomes of the financial and monetary policy validated the ultimate approach that was adopted throughout the course of 1999 and 2000 with the aim to eliminate the causes of economic imbalance.

Particularly the joint effect of the pro-reform economic policy and a favourable situation in the external economic environment in 2000 but also the growth of the prices of industrial producers, presumably led to an improved corporate financial situation. The measures adopted to support both external and internal market balance, together with implementation of restructuring goals and under low GDP growth in 1999 and 2000 spilt over into a serious distortion on the labour market.

Deterioration of economic equilibrium in the course of 1996-1998 was reflected in the overall economic development not earlier than in the fourth quarter 1998 and 1999, with a delayed effect. Average annual values regarding the overall situation of the economy indicated that in the year 2000 the stabilising measures started to bring their effect for a favourable development of the economy as a whole.

In conclusion to the overall review on the economy of the Slovak Republic in 2000 I would like to repeat, that the overall equilibrium improved. At the same time it is necessary to stress that the achieved equilibrium cannot still be considered as satisfactory and this improvement need not be sustainable. Several open and complicated tasks from the year 2000 pass into the next period (namely the accomplishment of restructuralisation of the banks, restructuralisation of the business sector and the social system provision). Without addressing these problems equilibrium cannot be maintained at the level already achieved.

5. Conclusions

The macroeconomic development of Slovakia has reflected two factors that have been underestimated during the process of transition to date:

1. underestimation of the institutional framework of a functioning market economy,
2. underestimation of the required coordination of macroeconomic policies during the restructuring of the economy.

Repeated destabilisations of the economy were the result of these factors having been neglected. Therefore, even after a decade since the initial transition steps, the economic policy makers have frequently to consider problems similar to those they were facing at the very beginning: how to stabilise the economy, how to restructure it, how to prevent the existence of soft budgetary constraints, how to draft functional rules for the behaviour of economic entities under new conditions, etc.

Slovakia's example suggests that macroeconomic successes forced by the economic and political centre through inadequate stimulation of financial policy tools will vanish, and will not be able to be supported by a sufficiently viable corporate sector.

The fact that the imbalanced development has to be repeatedly remedied by packages of unpopular measures suggests the limited ability of the automatic economic regulators to operate, and the unreliability of the coordination mechanism of the economy.

In view of the above, I consider it necessary that economic policy support the supply side of the economy. That type of support can improve economic performance through effects on formal and informal rules of behaviour, elimination of allocation mechanism distortions, restructuring, support of human capital development, and innovations. While supply side support is less direct and not as fast as demand-side support, supply side effects are long-term in nature. Higher quality economic growth and stability can be achieved by this approach. Going back to the economic stimulation of performance through domestic demand stimulation would likely result in a recurrence of the problems of economic imbalances.

Table 1. Selected macroeconomic indicators of the Slovak Republic

	1995	1996	1997	1998	1999	2000	2001
Real GDP growth (%) *	6.7	6.2	6.2	4.1	1.9	2.2	3.3
Inflation CPI-average (%)	9.9	5.8	6.1	6.7	10.6	12.2	7.2
Unemployment rate (%) **	13.1	11.3	11.8	12.5	15.9	18.6	19.2
Average monthly wage (USD)	242.2	266.0	274.4	283.9	259.0	247.4	256.0

Notes:

* up to 1999 according to ESA 79³, 2000 according to ESA 95⁴

** Labour Force Survey (statistic method)

Source: Statistical Office of the Slovak Republic, National Bank of Slovakia, Ministry of Finance of the Slovak Republic.

A conceptual approach to completing the transition process is required. It must strive to improve the coordination of individual components of economic policy, provide links between macroeconomic policies and microeconomic restructuring, and eliminate distorted parts of the institutional framework. It can establish an environment that will not require more packages of rescue measures for survival under strains and uncertainty.

³ European system of integrated economic accounts - year 1979.

⁴ European system of national and region accounts in the community - year 1995.

References:

- Economic development of Slovakia in 2000* (2001), Slovak Academy of Sciences, April.
- Haluska, J., Olexa, M. (1999), 'Macroeconomic analysis o economic development in Slovakia 1993-1998', *Magazine Trend*, May.
- Marcincin, A., Beblavy, M. (2000), *Economic policy in Slovakia 1990-1999*, INEKO.
- Mikloš, I. (1993), 'Not the conception, but package of the measures', *Trend*, 7.4.
- SAV (Slovak Academy of Sciences), 'Slovakia: Restructuralisation – the way to the economic revitalisation' (1995), *The World Bank study*, Veda editorship.

The International Debt of Poland

Monika Bodo

In the 1980s, an international debt crisis occurred. The increasing debt of countries resulted in a lack of capacity on the part of debtor countries to serve their debts. As a result of this, foreign debt became a problem for countries and banks - the creditors. This situation posed a serious threat to the world's financial system and the world's economy and could have brought about a world recession. Debts call for the necessity to work out surplus in the current account of the balance of payments, due to the fact that it is possible to pay on time instalments of credits taken out as well as interests for a given year. It is substantial that the surplus should not be a result of limiting the imports but that it should be caused by an increased dynamics of the growth of exports over imports. A safe threshold is constituted by a situation when the debt repayment does not exceed a fifth (i.e. 20%) of the exports value. At the beginning of the 1980s, debts were so large in the case of many countries that instead of being a factor to stimulate the economic development credits, they became a slowing-down factor.¹

Short-term credits granted by, above all, the Bank for International Settlements in Basle and the International Monetary Fund, were to counteract the crisis. These actions were defined as bridging finance. Their main purpose was to maintain the paying capacity of the countries in debt until long-term plans to solve the crisis were prepared. The creditor countries were ready to bear some costs in the face of the global crisis. The International Monetary Fund played a vital part in the change of the approach to the issue of debts. It became one of the main initiators of adaptation programmes in the countries in debt; at the same time, it induced commercial banks to change the debt repayment conditions they had adhered to up to this time and to grant further credits. Market means and techniques to reduce debts were developed in this period: trading in debts began, while a part of the debts was amortised by the countries-creditors (See: Kisiel-Łowczyc, 1997, p. 192-193; Lutkowski, 1996, pp. 143-144).

Poland filed an application to join the IMF only in November 1981 (and was finally accepted in 1986). At this time, our country was in the situation of an open financial crisis. With the total debt of US\$ 23 billion and a deficit to the West of US\$ 2.3 billion, Poland was not able to pay the instalments of credits due. The approval by the IMF of the Polish adaptation plan and giving an access to credits, made it easier for Poland to hold talks with the Paris Club about restructuring our guaranteed debt. On 24 April 1991, an agreement on the reduction and reorganisation of the guaranteed debt was concluded. The Paris Club then decided to amortise 50% of the debt, out of which 30% was amortised at once and the remaining 20% was to be amortised only when

¹ In accordance with the calculations made, if a country in debt does not repay its debt on time this results in a five-times drop of the liquidity of the world's financial system. A few factors contributed to upsetting this proportion in the 1970s and the 1980s: a rise in petroleum prices (years of 1973-1974 and 1978-1979); an increase of the number of petrodollars; a recession in industrialised countries and a drop in the demand for raw materials, which in turn contributed to the drop of the prices of these; it was easy to obtain credits and the interest rate was relatively low; using loans in a manner inconsistent with the declared purpose. See: Kisiel-Łowczyc (1997, pp. 190-192); Lutkowski (1996, pp. 142-143); Bernaś (1995, pp. 336-339).

Poland had realised the adaptation programme presented to the IMF in the spring of 1991. Poland made an offer to its creditors to buy out the debt from 1988, 41 cents for one dollar and the debts from 1983 and 1984 for 38 cents for one dollar. 99.5% of the debt was declared for the reduction contract and commencing 14 September, contracts with individual creditors began to be signed. On 14 April 1994, judicial creditors finally approved the reduction of the Polish debt by 50%.

The agreement with the Parish Club opened the way to negotiations with creditors gathered around the London Club. An agreement with the London Club signed in April 1994 defined general principles for the reduction of our debt. A debt estimated at US\$ 13.2 billion was reduced by 45.2%. The agreement was reached in accordance with Brady’s principles.

In the years 1990-1998, Poland also received credits from the World Bank to the total amount of US\$3.5 billion. These credits concerned definite projects in the country (table 1).

Table 1. The World Bank credits for Poland, 1990-1998

Years	Amount (US\$ m)	Intend
1990	145	Railways Transport
	250	Energy Resource Development
	300	Structural Adjustment Loan
1991	200	Financial Institution Development Loan
	238	Privatisation and Restructuring Loan
	228	Heat Supply Restucturing and Conservation Project
1992	100	Health Services Development
1993	104	Forestry Development Support Project
	150	Road Project
	300	Agriculture Structural Adjustment Loan
	325	Enterprise and Financial Sector Adjustment Loan
1994	170	Debt and Debt Service Reduction Loan
1996	160	Power Transmission Project
1997	300	Road II
	200	Help for community suffer because of flood

Source: Leśniewski and Zachurski (2002, pp. 52-56).

Agreements with the creditors and their aid made it possible to lower the debt (tab. 2).

Table 2. Polish foreign debt in the years of 1990-1998 (in million US\$)

Years	1990	1991	1992	1993	1994	1995	1996	1997	1998
Total gross foreign debt	48,475	48,412	47,044	47,246	42.174	43,957	40,558	38,496	42,687

Source: GUS (1991-1999).

An application of various techniques of debt reduction, for example, through the market of debts contributed to the debt decrease, as well. On the market of debts, the creditor countries offered for sale the debts of individual countries estimating their value depending on their nominal value and the possibility of receiving a given debt, that is as a result estimating a debt on market conditions, while the buying and selling powers of a given debt or its part played a vital role. It was private individuals who bought the debts most often, operating for an increase of their value or, of a company that intended to make an investment in a given country (Kisiel-Łowczyc, 1997, p. 193).

A country in debt could also buy back a debt on this market by prior consent from the creditors: the so-called buy-back arrangement. Operations of this type are advantageous from a debtor's point of view as they enable one to obtain a discount from creditors owing to buying a debt back on a secondary market. Moreover, while they do not result in money creation, they decrease foreign debts in a short period of time (in comparison with the buying back time through a repayment in instalments). The debtor can choose how to repay the debt: through its amortisation or increasing the imports (or the reserves). However, this buying back technique has some drawbacks, among others, a necessity to pay out financial means (the reserves of a country in debt), which can otherwise serve to make the economic development more dynamic. In the case of a shortage of sufficient reserves this makes the debtor use the resources transferred to short-term public spending. If these resources come from the IMF this country has to conform to the programme and the requirements of the IMF. The importance of this solution is shown by an increase of buy-back turnover, which in 1989 amounted to US\$ 70 billion and in 1992, as much as US\$ 500 billion (Pangsy-Kania, 2001, pp. 84-86).

A debt for equity swap is another way to convert debts. It consists in swapping a debt for the capital of a country in debt. Two methods exist applied in this restructuring technique: a direct method and an indirect method. The former concerns an entity which while being a creditor does not grant a discount and accepts on its own an investment risk swapping its debt for equities in the debtor country. In the indirect method, the debt is bought out from the creditor by a different entity on the market of debts (with a discount, which is higher, the higher the risk of not repaying the debt is) with the help of mediating institutions, e.g. banks. Next, the "new" creditor swaps the debt for the currency of the debtor's country: the point of reference of the swap is a nominal debt.² The currency swapped for, most often in the form of a title of ownership note, can be assigned solely for investments in a country in debt or for the purchase of raw materials and other materials. A possibility also exists for a debtor to define the required targets of investments. In Mexico, for example, a programme to use the debt swap operation provided for an assignment of the total of the resources gained to the stocks of privatised companies. An advantage of this method for a creditor is a possibility to obtain the currency of a given country for a relatively low price owing to the obtained quantity of discount on the market of debts, particularly if the creditor is

² A discount obtained on a market of debts can be very large, e.g. for 1 US\$ of the debt of Chile 60-61 cents were paid in 1987, while in the case of Peru: 5-8 cents. See: Najlepszy (1993, pp. 337-339). Depending on whether this is a government debt, the debt is converted according to the official exchange rate. In the case of a private debt the rate is agreed upon (Woroniecki, 1988, p. 24).

intending to make an investment in a country with debts. This is also advantageous for this country with debts as it can buy back its debts for a lower price while at the same time it facilitates an increase in the number of investments in many economic sectors. Such an act of buying back improves the country’s balance of payments as it economises not only on decreasing the capital instalments but also on decreasing the possible interest should the debt not be bought back.³

A phenomenon of a reduction of debts also appeared in return for investments in the area of environmental protection, the so-called debt for nature swap. In such a case, a debt is cancelled or sold with a discount to an ecological organisation, which in turn while swapping it for the currency of a country in debt or bonds makes at the same time investments that facilitate environment protection. Owing to this solution, the Minister of Finance created in 1992 the Eco-Fund, whose task was to manage the resources (*c.* US\$ 500 million) obtained through a debt for nature swap. The debt for nature swap enables settling a part of the foreign debt without the necessity to change the country’s currency into foreign exchange as the payment of the agreed part of the debt consists in transferring it to the Polish zloty through the mediation of the Eco-Fund to ecological investments, which serve not only the country but also improve the living conditions (decrease of pollution) of all the people. In order to encourage a country being a creditor to swap part of its outstandings for ecological investments in a country being in debt, during the realisation of investments machines and equipment are most often purchased in the country that agreed to debt for nature swap. The size of a debt for nature swap in relation to the whole of the debt in accordance with the agreement concluded between Poland and the Paris Club on the reduction and reorganisation of indebtedness, cannot exceed 10% of the total debt or US\$ 20 million: depending which is higher (Pangsy-Kania, 2001, pp. 81-84, pp. 134-139).

The value of concluded debt-for-nature-swap contracts is presented in the table below:

Table 3. The value of concluded debt-for-nature-swap contracts

Date of debt for nature swap	Country	Amount	Percent of debt	Remarks
1991	Finland	US\$ 20 million		Concerns projects agreed upon jointly by both countries
1992	USA	US\$ 367 million	10%	
1993	Switzerland	CHF 68 million	10%	
1993	France	FRF 260 million	1%	

Source: Mozejko (1995).

³ If a company which is intending to invest in Poland would like to obtain Polish currency at a lower cost, it can order a bank mediating in operations on the international market to buy the Polish debt of US\$ 5 million value for US\$ 2 million. The investor then changes this debt in the National Bank of Poland for PLN for an equivalent of e.g. US\$ 4 million. Owing to this operation the investor can obtain the Polish currency of US\$ 4 million value for a price half as low, and the central bank while buying back a debt of US\$ 5 million, pays for it 20% less, that is US\$ 4 million; example from: Pangsy-Kania (2001, pp. 73-75).

Apart from the above mentioned countries, three more countries showed their interest in this way to reduce the Polish debt: Sweden – US\$ 6.5 million, Italy – US\$ 32.5 million and Norway. A sign of recognition of the actions of the Eco-Fund was the main prize that it received on the worldwide competition “Energy Globe – The World Award for Sustainable Energy” in March 2002 in the category of private and public initiatives for an application of the mechanism of the foreign debt swap for investments concerning environmental protection. The value of the 152 projects in this area during the whole period of the Eco-Fund activity exceeded PLN 1.2 million (the Fund itself supported them with the amount of PLN 240 million) (Budnikowski, 1989; Możejko, 1995; Pangsy-Kania, 2001, pp. 81-84, p. 135; Trzaskowski, 2002, p. 34).

In most cases, buying back the debt is done in accordance with the terms and schedule of repayments. However, sometimes this happens before the day of payment. This happened in the case of a part of Brady’s bonds, with the day of redemption on 27 October 2024. A total of US\$ 289.5 million of the debt was bought. These were the so-called RSTA type bonds, i.e. bonds concerning revolving credits not repaid by Poland. Owing to these actions, the structure of the debt was improved, its servicing costs decreased, as well. For example, a debt recently bought back saved US\$ 330 million: this is the amount of interest till the year 2024 concerning this debt. This enabled a sale of a part of 30-years’ re-couponed bonds of the US government (the so-called collaterals), which secured the debt. A nominal value of collaterals is the same as the value of Brady’s bonds. Owing to the fact that a part of the debt was bought back earlier nominally the same value of American bonds could be sold on the market, as a result of which the ministry can recover 25% of their value, that is c. US\$ 70 million. However, due to a high exchange rate of the Polish złoty, the sale of these bonds can occur later when the exchange rate of the Polish złoty falls down, thanks to which after converting the currencies a larger amount of złoty will be gained.⁴

Money to retire Brady’s bonds was gained by the Ministry from the sale of Eurobonds in January 2001. An amount of 750 million euro gained on the international capital market in part (250 million euro) paid into a currency account in the National Bank of Poland enabled an anticipatory buying the debt back. A swap of an old debt originating from the communist period for Eurobonds is to facilitate an improvement of the credibility of Poland on the international capital market. This will be particularly important in the years of 2004-2008, when the largest repayments are due.

Other instances of an anticipatory buying back in the previous years enabled Poland to buy back almost half of the debt in Brady’s bonds. In 1997, the total value of the Polish debt due for Brady’s bonds was US\$ 7,739.7 million, the four retirements of Brady’s bonds so far totalled US\$ 3,665.7 million, bonds of total US\$ 4,074 million remained. Out of which:

- US\$ 2,487 million (c. 61%): PDI bonds,

⁴ For example: in the year of 2000, the Ministry of Finance also retired a part of Brady’s bonds (US\$ 942 million), thanks to which a total value of US\$ 1,553.7 million (with the redemption for 2022-2023) could be sold. The Ministry withheld this operation till 8 January 2001 when on the secondary market the price of these bonds reached a favourable level; the amount of US\$ 438.9 million obtained in this manner was converted into the Polish złoty in the National Bank of Poland (c. PLN 1.8 million) and was assigned for the current budgetary needs. See: *Raport o działalności urzędu w latach 1997-2001*; *Wprost* (2001) No. 17, p. 36; *Rzeczpospolita* (2001) No. 86.

- US\$ 745 million (18%): parity bonds,
- US\$ 449 million (11%): RSTA bonds,
- US\$ 393 million (10%): DCB discount bonds.⁵

Brady's bonds are traded on the secondary market of debts. They provide information to Poland on the interest shown in our debts and can become a starting point for a decision to issue Eurobonds, creating an opportunity for a successful emission. At the same time, their value on the secondary market reflects the country's current economic situation, which is of importance to investors, as well. One of the highest selling prices is achieved by past due interest bonds as they are regarded as carrying the largest risk on the market, which is connected with a lack of collateral for these in the form of the US treasury bonds.

Brady's bonds are secured with the treasury bonds of the US government as they have been considered to be the safest. Poland has purchased American re-couponed 30-years' treasury bonds, the so-called collaterals, which were then deposited on a blocked account of the Federal Reserve. The nominal value of these bonds is equal to the value of Brady's bonds. The Polish government cannot sell collaterals on the secondary market until it retires the bonds with which they are secured. Collaterals, similarly to Brady's bonds, have a maturity date in the year 2024. Interests from collaterals are calculated in various manners: depending of the type of Brady's bonds they secure.

The prevailing part the Polish foreign debt consists of credits that are repaid on time. At the end of 2001, the debt owed to Brazil was bought back. The nominal value of the debt was US\$ 3.32 billion with maturity in March 2009. As a result of a previously concluded agreement, Poland repaid this debt earlier. Advantageous terms were negotiated, the debt was repaid at one time but with a discount – below the nominal value – for US\$ 2.46 billion. The Ministry of Finance gained foreign exchange resources to realise the terms of an agreement with the National Bank of Poland from foreign exchange reserves. Thanks to such an operation Poland saved US\$ 869 million on the nominal value of the debt alone, not counting the interest which it would have had to pay if the debt had been repaid on time. Earlier, Brazil offered security. As a result of this, Brazil was to issue on the international capital market bonds that were to be secured with the Polish debt. Such a collateral would cause an increase in the value of these bonds, however this would also mean bearing costs connected with the issue of the bonds and a risk in the case of a failure. This is why a decision was made to repay the debt directly by Poland. This debt originated from the 1970s. It was the result of incurred imports credits. They were not repaid in the 1980s. The repayments were resumed only after the reduction of the Polish debt as a result of talks with the Paris Club.⁶

⁵ PDI bonds – this kind of obligation came into being from no pay back and no extinction interests with the time of redemption 2014. Parity bonds – come into being from long- and middle-term debt, with the time of redemption 2024. RSTA bonds – come into being from short term debt, with the time of redemption 2024. Discount bonds – this obligation with the time of redemption 2024, come into being from debt creditors banks, with capital reduction (*Rzeczpospolita*, 2000, No. 11); Ministry of Finance, data on 1998 year; *Rzeczpospolita* (2001) No. 86.

⁶ The value of the planned issue of the Brazilian bonds was to be US\$ 2.4 billion and was to include a period of 10 years. Due to the relatively good position of Polish commercial papers on the international

However, the repayment of the foreign debt entails the necessity to purchase a large quantity of hard currencies – most often, American dollars – hence the Ministry of Finance while foreseeing such a spending makes every effort to be prepared for it. One of the methods is to accumulate a proper quantity of the Polish currency on the domestic market so that it could be converted to dollars at the right moment. A method applied more often is to sell bonds and papers on the domestic market. This money is then deposited on an account in the National Bank of Poland in the form of, for example, a deposit so that they could in the right moment be converted and the instalments of the foreign debt be repaid. However, this entails the necessity to increase the domestic debt and to repay it (*Rzeczpospolita*, 2002, No. 42). In order to improve the repayment of the foreign debt in 1999 the National Bank of Poland proposed opening a foreign currency account to deposit money (in foreign exchange) originating from privatisation and which was to be assigned to the foreign debt repayment. This deposit was to contribute (among other things) to the attenuation of fluctuations of the Polish złoty exchange rate. As a rule, foreign investors while buying shares in privatised companies made all payments in Polish złoty first buying it on the market and leading to the increase of the strength of the Polish złoty. The government in turn while intending to use the funds accumulated in this way to repay the foreign debt converted it back to other currencies, as a result of which the Polish złoty weakened. In order to attenuate the foreign exchange rate fluctuations resulting from these operations the National Bank of Poland proposed to the government to make a part of payments connected with privatisation in foreign currencies. In October 2002, a part of payments for the sale of Telekomunikacja Polska S.A. came to this account. A part of this amount was assigned by the government to retire Brady's bonds (US\$ 942 million). In the course of time, the guidelines concerning the sources of the origin of foreign exchange that can appear on this account were modified. Initially, this could be only foreign exchange gained solely from privatisation. At present, this account refers to other sources to obtain foreign exchange, among others from an issue of Eurobonds. However, the purpose of these resources is the repayment of the foreign debt. The government's assumptions for the year 2000 provided for receipts from privatisation of PLN 20.1 billion, out of which PLN 8 billion (c. 40%) was to come to the account to enable the repayment of a part of the foreign debt of PLN 5.1 billion planned for the year 2000. The remaining amount could be used for an anticipatory buying back a part of the debt or could constitute a collateral of the repayment of the instalments due for the next year.⁷

market Brazil expected a better term of the credit: its lower interest. Before that, the Polish debt had already been once a collateral of the French government securities. In 1999, the French government agency issued a 7-years' bonds with a nominal value of FRF 1,250 million and 10-years' bonds of US\$600 million, whose collateral was the Polish debt owed to France. These bonds bore the risk on the part of Poland and their issue was agreed upon with the Polish government. Słojewska (2001); *Rzeczpospolita* (2001) No. 255; *Wprost* (2001) No. 38, p. 42.

⁷ Jędrzejewska (2000); 'Dewizy na grosze jutro. Rozmowa z Bogusławem Grabowskim, członkiem Rady Polityki Pieniężnej o wykorzystaniu wpływów z prywatyzacji', *Rzeczpospolita* No. 85; *Rzeczpospolita* (1999), No. 297; *Rzeczpospolita* (2000), No. 175, No. 239, No. 240, No. 257; *Rzeczpospolita* (2001), No. 10.

Eurobonds constitute a part of the Polish debt. Eurobonds have almost all attributes of bonds with the exception of the fact that they are denominated in currencies different from the one of the country issuing them. Their sale and trading in them is done on international markets (stock exchanges). “A Eurobond is hence a bearer’s security. It constitutes an obligation on the part of the issuer to pay to the owner of the Eurobond the amount of the Eurobond (once or in instalments on specified dates) together with the interest after presenting this document as well as to pay interest coupons on conditions specified in it until the time of the redemption of the Eurobonds.” (Rączkowski, 1977, pp. 370-375).

Until this day, Poland has issued bonds on the international market eight times.

Table 4. Basic data concerning the issue of the Polish government Eurobonds

Date of issue	Amount	Time of redemption	Interest	Banks – organizers
July 1995	US\$ 250 million	13 July 2000	7.75	JP Morgan
July 1996	DM 250 million	July 2001	6.125	CSFB and Deutsche Bank
July 1997	US\$ 300 million	1 July 2004	7.125	JP Morgan
July 1997	US\$ 100 million	1 July 2017	7.75	JP Morgan
March 2000	600 million euro	March 2010	6	CSFB and PNB Paribas
January 2001	750 million euro	February 2011	5.5	Deutsche Bank and Merrill Lynch
November 2001	250 million euro	February 2011	5.5	Deutsche Bank and Merrill Lynch
February 2002	750 million euro	12 March 2012	5.5	CSFB and SSSB

Abbreviations applied:

CSFB – Credit Suisse First Boston

SSSB – Schroder Salomon Smith Barney

Source: Ministry of Finance, data on: www.mf.gov.pl; *Rzeczpospolita* (2002) No. 49.

Obtaining currencies for the foreign debt repayment is not the only reason for the issue of the Eurobonds. In March 2000, Poland issued 10-years’ Eurobonds (with the redemption time of 22 March 2010) of 600 million euro and an interest (a coupon) of 6%. These were the first Eurobonds of the Polish government nominated in euro. Poland, while issuing these bonds, used the mediation of two banks: PNB Paribas and Credit Suisse First Boston. Before they were sold they were presented (the so-called road-shows) at the most important European financial centres. The image of Poland as a debtor is improving, which is evident in the interest these bonds enjoyed: the orders reached a total value of 2 billion euro. The purpose of this issue was to create a benchmark, i.e. a reference point for Polish enterprises if they were to gain resources (euro) on foreign capital markets.⁸

Reasons why the government decides to issue Eurobonds may vary, for example, receipts from the sale of Eurobonds in November 2001 supplied the state’s budget and were used to finance its deficit. The issue of 10-years’ Eurobonds in February 2002

⁸ The issuing price of these bonds was 98.3% of the nominal value while the final profitability 6.24%, which is 0.82% more than the profitability of the bonds issued by the German government (therefore, the investors estimated that the risk of the insolvency of Poland exceeds by this value the risk connected with the German government securities); *Rzeczpospolita* (2000) No. 57.

was assigned just to the repayment of foreign commitments. The whole of the receipts was on the foreign exchange account of the Ministry of Finance in the National Bank of Poland. For the year 2002, the Ministry of Finance has planned an offer for foreign investors the value of US\$ 800 million and 1 billion euro (PLN 7.328 billion).⁹

It should be noted that an issue of Eurobonds, while enabling one to obtain foreign exchange for the repayment or buying back a part of the debt remaining so far, it does not significantly decrease the debt because the bonds themselves become a debt. However, an issue of these enables a change in the structure of the foreign debt, which is related to the improvement of the terms of the credit repayment.

The size of the Poland's foreign debt consists only in part of the State Treasury debt. In reality, the whole of the Polish debt at the end of the first quarter of 2001 was US\$ 69.2 billion, out of which US\$ 33.5 billion is the debt of the government sector and the remaining part of US\$ 29.3 billion is the debts of companies, US\$ 6 billion is the debts of the banking sector and US\$ 0.4 billion is the debt of the National Bank of Poland. In the recent years, the greatest dynamics of the foreign debt increase is to be observed in the case of companies. The total foreign debt in the first quarter of 2001 was 43% of GDP (in 1996 – 33%). A positive phenomenon is a drop (commencing with the end of 1999) of the value of short-term credits (to be repaid during one year). In March 2001, their value was US\$ 9 billion (in relation to the foreign exchange reserves ca. 28%), while at the beginning of the year 2000 – 11.1 billion.¹⁰

Also Polish companies use the possibility to obtain capital through an issue of Eurobonds. It was estimated in the middle of 2001 that foreign investors possess bonds of Polish companies of c. US\$ 3 billion value. At the end of the year, this value reached US\$ 3.6 billion. Telekomunikacja Polska S.A. (the main Polish telecommunications company) is the leader in this area, which till the middle of 2001 sold on the international capital market Eurobonds of US\$ 1 billion and c. 1.5 billion euro. At the beginning, most of the issues were denominated in US dollars. At present,

⁹ The issuing price of the bonds was 98.32% of the nominal value and their profitability was 5.725%, which is 75 points (0.75%) higher than the profitability of the German government treasury bonds. During the earlier issues in January 2001 the profitability of Polish bonds exceeds German bonds by 80 points while in case of a supplementary issue from November 2001 only 74 points. Ministry of Finance, data on: www.mf.gov.pl; *Rzeczpospolita* (2001) No. 279; *Rzeczpospolita* (2002) No. 49.

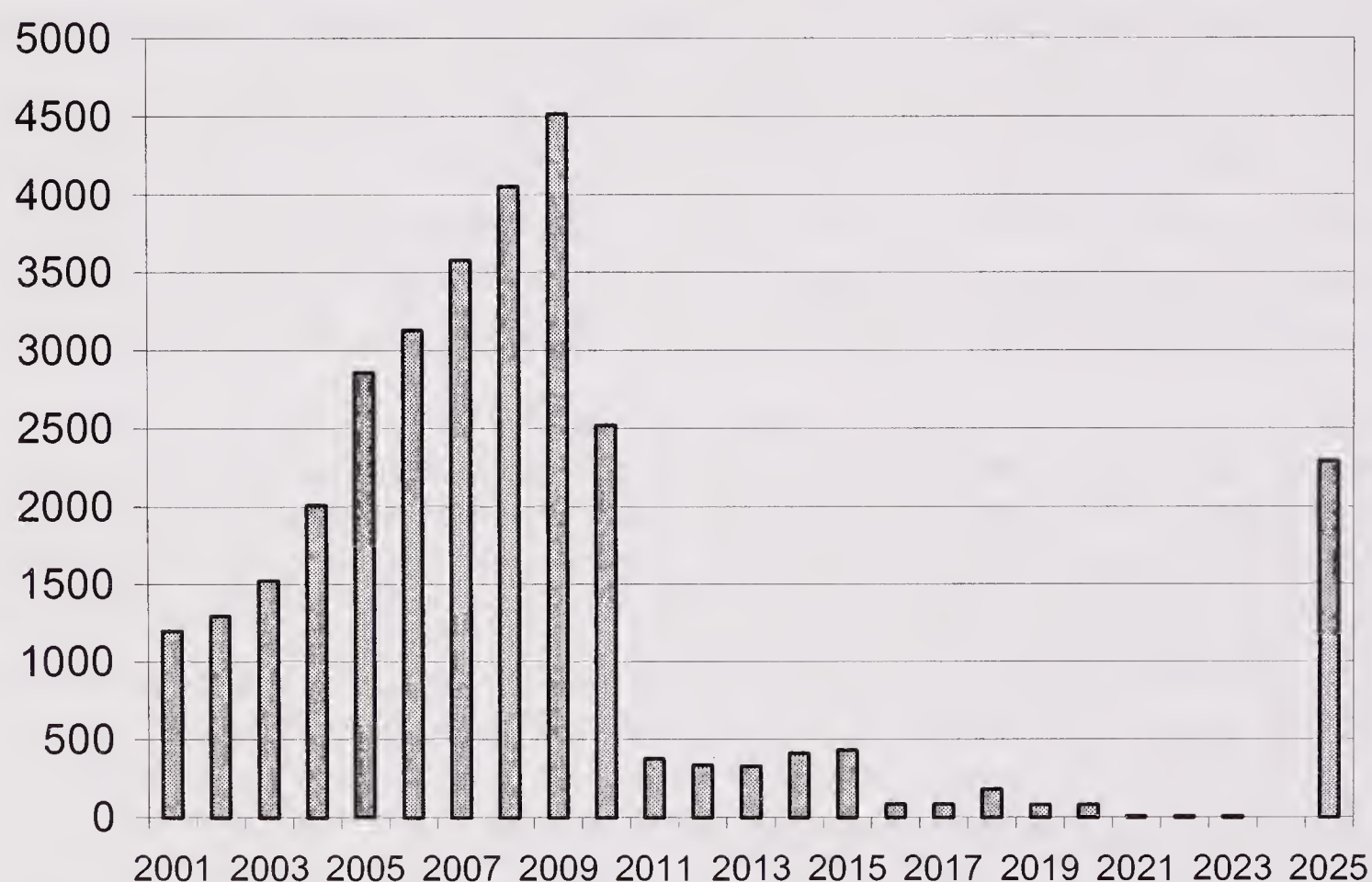
¹⁰ In the years of 1996-2000 the foreign debt in all sectors of the economy rose from US\$ 47.5 billion to US\$ 68.2 billion at the end of the year 2000 (1997: US\$ 49.6 billion, 1998: 59.2, 1999: 64.9). One of the reasons for the increase of the debt of companies was issues of bonds on foreign markets, e.g. US\$ 3.6 billion from the debt of companies is securities of companies in the hands of foreign investors. An additional factor contributing to an increased interest in foreign loans was a very disadvantageous interest on credits in the Polish zloty, as well as an unfavourable foreign exchange rate of the Polish zloty and its over-appreciation. This, however, poses a threat in the case of the depreciation of the Polish currency as it causes an increase of costs connected with the repayment of credits (more zloty will have to be used for the repayment of a credit of the same foreign exchange value) and, at present, not many companies can afford to protect themselves against such a risk. This risk is very high if one considers the worsening results of the foreign commerce, a decreasing rate of GDP growth, problems connected with the Polish budget and the burden of the government foreign debt servicing. Credits and loans taken out abroad constituted c. 43% of the debts of companies (the value as at the end of March 2001: US\$ 12.5 billion, which is 26% higher than in the previous year; US\$ 8 billion of credits obtained directly from foreign investors, the so-called parent companies; c. US\$ 5 billion of business loans, occurring as a result of deferred payments. Chrościcki (2001, p. 24).

owing to Poland's expected entry to the European Union, many companies chose issues in euro. In the middle of 2001, the value of issues in both currencies was comparable. Also, part of entities of self governments obtain in this way resources for their businesses and investments. In the middle of 2002, the amount of foreign debt by way of the issue of securities was *c.* PLN 134 million and exceeded almost twice the amount of credits taken out abroad.¹¹

At the beginning of 2000, Poland's foreign debt was US\$ 31 billion, which constituted *c.* 21% of GDP. The fact that at the beginning of 1990's this relation was on the level of 80% of GDP testifies to the progress Poland has made in this area. At the end of July 2000, Poland's foreign debt was as follows (see: *Rzeczpospolita*, 2000, No. 11):

- US\$ 21,511 million – the Paris Club,
- US\$ 5,306 million – Brady's bonds,
- US\$ 2,061 million – international financial institutions,
- US\$ 1,073 million – Eurobonds,
- US\$ 286 million – others.

Figure 4. All rates (in million US\$), which the Polish government should pay back annually until 2024



Notes: Data base on budget presume in the year 2001, and estimate data for 31.07.2001- value of credit rates (in US\$ million): 2001-1.278, 2002-1.413, 2003-1.905, 2004-2.697, 2005-2.929, 2006-3.339, 2007-3.778, 2008-4.199, 2009-2.348, 2010-913, 2011-1.006, 2012-344, 2013-438, 2014-451, 2015-101, 2016-93, 2017-186, 2018-85, 2019-81, 2020-9, 2021-9, 2022-9, 2023-1, 2024-1.193

Source: Ministry of Finance of the Republic of Poland.

¹¹ 'Zadłużenie rośnie powoli', *Rzeczpospolita* (2000) No. 163; see also: Karpiński (2001).

In the future, this diagram will change. The Polish government tends to pay back the debt before the time of redemption and improve the structure of payment, thanks to the sale of eurobonds or privatisation, for example. The same possibility is on the market of debts and new methods using to convert debts. All this activity helps to facilitate an improvement in the credibility of Poland on the international capital market. This will be particularly important when the largest repayments are due.

References:

- Bernaś, B. (1995), *Handel zagraniczny i usługi międzynarodowe (Przedsiębiorstwo, Polska, Unia Europejska)*, Książka Ekonomiczna, Wrocław.
- Budnikowski, A. (1989), 'Zamiana długu na wydatki na rzecz ochrony środowiska', *Handel Zagraniczny*, No. 4-5.
- Chrościcki, T. (ed.) (2001), 'Koniunktura w przedsiębiorstwach. Polskie długi', *Nowe Życie Gospodarcze*, No. 17, 9 September, p. 24.
- 'Dewizy na grosze jutro. Rozmowa z Bogusławem Grabowskim, członkiem Rady Polityki Pieniężnej o wykorzystaniu wpływów z prywatyzacji', *Rzeczpospolita*, No. 85, 10 April 2000.
- Główny Urząd Statystyczny (GUS), statistical yearbooks for the years 1991-1999.
- Jędrzejewska, K. (2000), 'Budżet. Prywatyzacyjny rachunek w NBP', *Rzeczpospolita*, No. 74, 28 March.
- Karpiński, S. (2001), 'Korzystniejsze niż kredyty', *Rzeczpospolita* No. 86, 11 April.
- Kisiel-Łowczyk, A.B. (ed.) (1997), *Współczesna gospodarka światowa*, Wydawnictwo Uniwersytetu Gdańskiego, Gdańsk.
- Leśniewski, B., Zachurski, T. (2000), 'Ekonomia Globalna', *Wprost*, No. 12, pp. 52-56.
- Lutkowski, K. (1996), *Międzynarodowy system walutowy*, Poltext, Warsaw.
- Możejko, E. (1995), 'Życie z długiem', *Życie Gospodarcze*, No. 15.
- Najlepszy, E. (1993), *Międzynarodowe finanse przedsiębiorstw*, Bafina, Poznań.
- Pangsy-Kania, S. (2001), *Zadłużenie zagraniczne Polski*, Wydawnictwo Uniwersytetu Gdańskiego, Gdańsk.
- Raport o działalności urzędu w latach 1997-2001*, Ministerstwo Finansów, www.mf.gov.pl.
- Rączkowski, S. (ed.) (1977), *Rozliczenia międzynarodowe*, PWE, Warsaw.
- Rzeczpospolita* (1999), No. 297, 21 December.
- (2000), No. 11, 14.01; No. 57, 8.03; No. 74, 28.03; No. 85, 10.04; No. 163, 14.07; No. 175, 28.07; No. 239, 12.10; No. 240, 13.10; No. 257, 3.11.
- (2001), No. 10, 12.01; No. 86, 11.04; No. 201, 29.08; No. 255, 31.10.
- (2002), No. 42, 19.02; No. 49, 27.02.
- Słojewska, A. (2001), 'Brazylia. Planowana emisja papierów dłużnych. Polskie zabezpieczenie', *Rzeczpospolita*, No. 201, 29 August.
- Trzaskowski, S. (2002), 'EkoFundusz nagrodzony', *Nowe Życie Gospodarcze*, No. 6, 24 March, p. 34.
- Woroniecki, J. (1988), 'Udziały kapitałowe zamiast długów', *Handel Zagraniczny*, No. 2, p. 24.
- Wprost* (2001), No. 17, 29 April; No. 38, 11 November.
- 'Zadłużenie rośnie powoli', *Rzeczpospolita*, No. 163, 14 July 2000.

Consumption Patterns in Poland during Transition – Microeconomic Analysis with Regional Aspects

Krzysztof Piech

1. Introduction

Consumption is one of the factors, which contributes most to economic growth. This has been known particularly since John M. Keynes tract was published in 1936. Consumption decreases during economic crises, but an opposite situation is also possible: decrease of consumption (for example due to the course of the business cycle) influences economic slowdown. Such dependence can be seen both in Poland as well as in many other countries, including Japan.¹ Poland has struggled with the economic crisis connected with transformation in 1990-91, beginning with the increase in food prices in September 1989, causing a serious decrease in real households' income and then – consumption demand. Since 2001 a slowdown in the pace of economic growth of Poland can be detected, which can be explained by the accompanying phase of the business cycle, called recession.

This article however, is not aimed at explaining the macroeconomic relations between aggregated variables in the economy, but to describe some elements of microeconomic consumers' behaviour during the early stages of the transformation of the Polish economy and later. It can have an influence on regional and even national economic development. There are two sets of data that can be used: the first – refers to a medium-sized city and the second refers to a richer part of the society, in one of the richest cities in Poland – its capital.² The second group of data can be used as a forecast of trends in consumption structure and will estimate the prospects of consumption in Poland.

It is very difficult to describe the changes in consumption behaviour especially during such a period of dynamic changes, like the 1990s in transition economies. In doing so, it is necessary to say a few words at least, on the specificity of consumption in a socialist system.

This was the period described in literature as a “shortage economy”, as defined by Kornai. It means, demand permanently exceeding supply. In other words, the shops were full of empty shelves. The most spectacular example of this phenomenon was the beginning of the 1980s (including the state of war period), when Polish citizens could purchase some products, with state permission. This was the so-called ‘cards system’, which regulated consumption demand for certain basic goods. Apart from this, people

¹ This paper was prepared within the framework of the research project: “Comparative study on consumption pattern in Poland and Japan”, conducted by the Hokkaido University in Sapporo (Japan) and the Department of Economic Policy of the Warsaw School of Economics.

² The broader results of the survey on consumption in Warsaw were published in: Chmielewski and Piech (2000, p. 196-203).

could buy some missing products on a black market or in luxury shops (Pewex), paying in 'hard currency' (dollars).

Despite the lower income in Poland in comparison with more developed countries measured in PPP terms, there was a higher rate of household savings as shown in the analysis of consumption demand. They were the result of 'forced savings'. The demand for savings was lower. The main reason being the lack of goods on the market thus the society was forced to save.

Another characteristic of consumption in socialist economies was huge losses resulting from the lack of consumers' intentions to rationalise their spending, caused by the lack of incentives for doing so. As I will show further, that was possible due to the lower sum of money spent on energy (gas, electricity), and water. When the consumers became obliged to pay only for things they really used, they received incentives to start making savings.

That previous consumers' behaviour was in part connected with another important characteristic of the socialist system: a very active social policy. The share of the state in the economy and in meeting consumers' demand involved the lack of incentives for economic behaviour, as mentioned above.

To describe the process of change in consumption structure, two cities were chosen. One of them was Chełm, which was the basis for statistical analysis, and Warsaw – for forecasts and collecting society's opinion.

Warsaw is a well-known European city. It has about 1.6 million inhabitants, a very low unemployment rate (one of the lowest in Poland), thus attracting people from other cities to migrate to the capital. The number of richest inhabitants is also the biggest in Poland. Chełm is a city with a 600-year history (one of most important Polish cities in 13th and 14th centuries), in eastern Poland. It is situated about 230 km east of Warsaw, 71 km east from Lublin and about 25 km from the eastern border of the country. For many years, Chełm has been a second largest city in region (in the new Lublin voivodship), with 70,759 inhabitants at the end of 1999.³

A good example of the distance between members of these analysed social groups can be the differences in personal income (family income per one person). Earnings of less than 1000 złotych (about US\$ 250) per month declared by 5% of the population questioned in mid-1999, between 1000 and 1999 złotych – 8.3%, 2000-2999 złotych – 18.3, 3000-3999 złotych – 20%, 4000-4999 złotych – 11.7%, and above 5000 złotych – 36.7% (above 10000 złotych – 18.3%). However, in practice the majority of Poles earned much less. Thus, inhabitants of the new Lublin voivodship represent the following structure: the lowest income per person (under 400 złotych, i.e. c.a. 100 dollars) had 8.5% of households (that was the highest score among all new 16 voivodships), income between 600-800 złotych – 11.6%, between 800-1000 złotych – 15%. The largest group of households was this one of income per person between 1000

³ The change in administrative structure in Poland after 1 January 1999 should be noted. Between 1975 and 1998 Chełm has been the capital of the Chełm voivodship. After that, it joined the new, enlarged Lublin voivodship, which included also other parts of the region. Chełm became the capital of the county, which was smaller than the former Chełm voivodship and now includes a few smaller items – communes.

and 1400 złotys – 17%. Only 0.46% of households reached level of income higher than 5000 złotys per person.⁴

If Poland's economy grows it will affect the individual's personal income, it is justified to say that the structure of income in Chełm will approach the questioned group of the capital's inhabitants. Another important assumption is that the behaviour of Chełm society's represents the behaviour of Poland's citizens, during the transition process. However, the exact data for Chełm should not be transferred directly to represent Poland. Moreover, the third assumption is that microeconomic analysis is more valuable in explaining society's behaviour than the macroeconomic one.

It is difficult to describe the consumers' behaviour of the micro-community of Chełm. It is connected with the lack of appropriate research in this sphere and difficulties with collecting complete, or sufficient statistical sources. In the 1990s there were only two issues of the internal trade survey in the Chełm voivodship published (in 1994 and in 1997). Other information about the transformation of consumers' behaviour originated mostly from other published statistical sources. It was difficult to conduct the related surveys in this subject, because of administrative reform in Poland in 1999 and connected with this – change of ways of collecting and publishing the statistical data. Thus, it was sometimes impossible to describe notions related only to Chełm city in different time periods.

2. Consumption patterns at the beginning of the transformation and in the mid-1990s – the case of the Chełm voivodship

Some of main characteristics and trends in consumption in Poland on the break of systems (1989) and thereafter are described below.

2.1. Ownership of shops

After 1989 impetuous and permanent changes in the structure of trade and ownership of commercial activity could be observed. This was connected with the processes of restructuring and privatisation. In 1989 cooperatives' trade had a share of *c.* 70% shops in the Chełm voivodship, and trade of state-owned shops – over 14%. In that time, private trade had about a 16% share, but its participation in turnover of retail trade was only *c.* 3-4%. In 1996 as much as 99.1% shops belonged to the private sector, of which only 10.8% was the property of cooperatives. In 1991, the number of shops belonging to the private sector (with the exclusion of cooperatives) reached 71.8%, in 1992 year – 72%, in 1993 – 81%, in 1995 – 85.2%, in 1996 – 88.3%. The value of the turnover of the private sector reached 99.7% of public sales in the voivodship. This meant that the share of private ownership in sales increased steadily during transformation. From the point of view of further research, it means that this sector reacted more for demand of consumers, and in effect – was more flexible to the market signals, which could have been observed by the changes in the shops' structure.

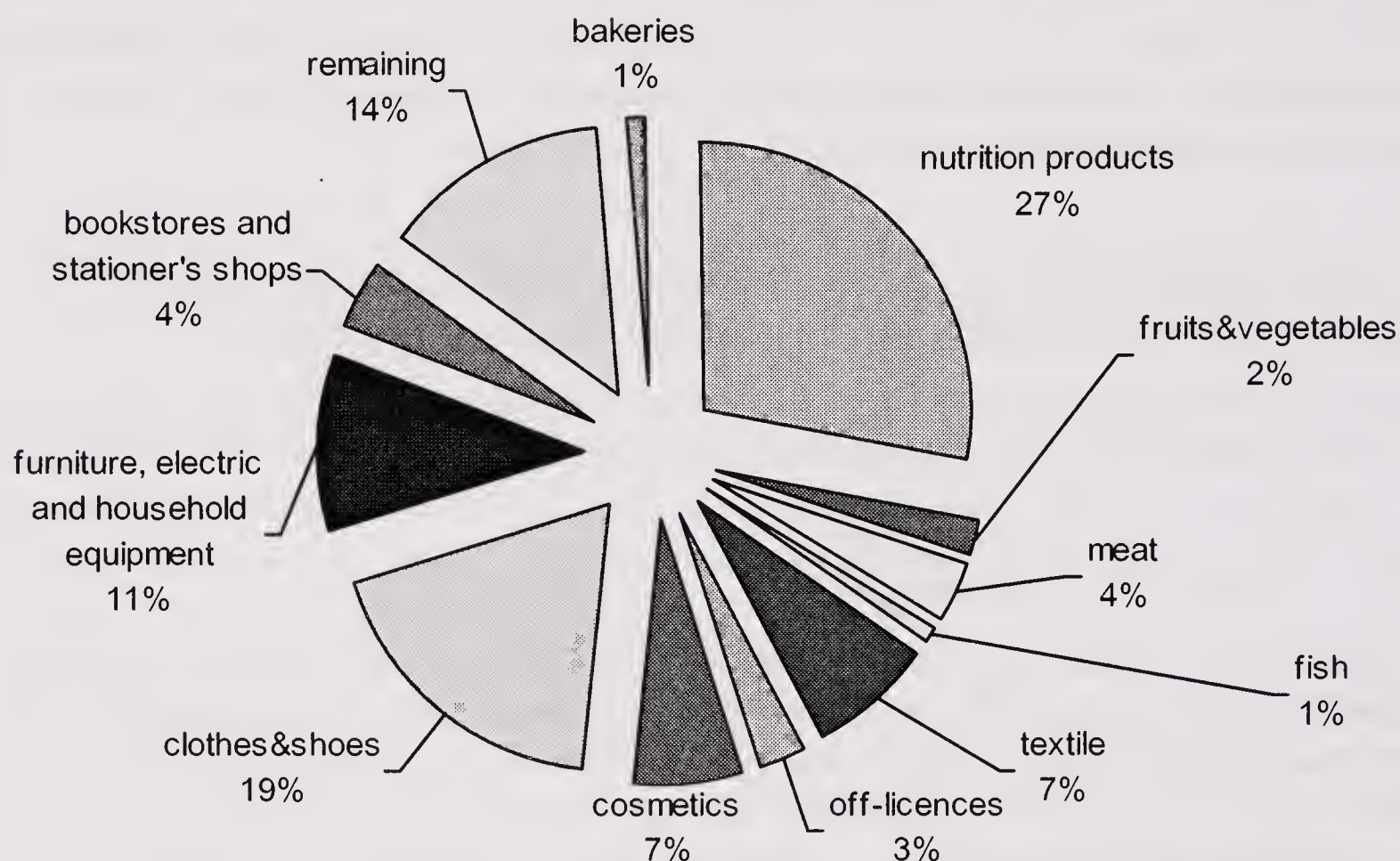
⁴ According to the survey conducted by Claritas Polska Sp. z o.o. in year 2000. See: Kresy (2001, p. 6).

Thus it is justified to assume that the structure of shops represents the demand of inhabitants for goods they are specialised in, especially in further phases of transformation.

2.2. Shops' specialisation

The most numerous group of shops in 1993 was those of global food products, clothes and shoes shops, and the remainder: furniture, household and electric⁵ equipment. In part, this structure resulted not so much from the demand of inhabitants, but from the remainders of the former system. It was reflected in changes, which happened during the three following years (described below).

Figure 1. Structure of shops according to their trade specialisation in 1993 in the Chełm voivodship



Source: WUS (1994, p. 6).

Figure 1 represents the structure of shops in the Chełm voivodship (not exactly in the city). There are hardly any more detailed statistical data of this type. It can be estimated by presenting the data on the structure of shops employing more than five people. These data are available (see table 1).

In 1993 specialised shops employing more than five people have a share of *c.* 29% of the Chełm voivodship shops. A relatively bigger part of food shops were situated in former voivodship in the country (65%, at *c.* 50% of country-shops). Almost two thirds

⁵ This group consists of radios and TV sets, as well as temporary lighting equipment. Group: bakery includes also confectioner's products.

of butchers' shops in the voivodship were located in Chełm, and only one fishmonger (and only one textile shop), too. Significant was the participation of Chełm in bakeries (c. 85%), shops with furniture and with lighting equipment (65%).

Table 1. Number of shops according to their specialisation of trade and location in 1993 in the Chełm voivodship

	total	food products	fruits & vegetables shops	butchers' shops	fishmonger's shops	bakeries	off-licences	cosmetics	textiles	clothes	shoes and leather shops	shops with furniture and lighting equipment	shops with electric and household equipment	bookstores and stationery shops	mechanical vehicles shops	remaining
W.	450	232	3	14	1	13	28	14	1	19	11	11	14	3	2	84
Gm	221	81	3	12	1	12	10	7	1	9	5	8	7	1	2	62
Ch	129	47	2	9	1	11	3	3	1	6	3	7	3	1	-	32

Notes:

Data refer to economic units, in which number of employees exceeds five persons, and having board of directors located in the Chełm voivodship

W – the Chełm voivodship

Gm – urban communities in the Chełm voivodship

Ch – urban community Chełm

Source: WUS (1994), p. 12.

About one third of the shops of the Chełm voivodship in 1993 located in its capital, specialised in selling books, stationeries and clothes (and the group of remaining products). The least share had shops specialising in the sale of alcohol beverages (c. 10% shops of the voivodship).

If we count the percentage structure of bigger shops in Chełm according to their specialisation, we find that 36% of them trade with global food products, and 25% sell items which are not included in detailed statistics. This could mean that the ways of measuring the internal trade changed slower than the real structures, which should be investigated. That is one more phenomenon of the transformation of the economic system. Other bigger groups of shops are bakeries (9%) and butchers (7%). Remaining groups had five percent or less as a share in this structure.

There is also another interesting phenomenon, which could be observed at the very beginning of transformation and still exists especially in poorer parts of Poland.⁶ After

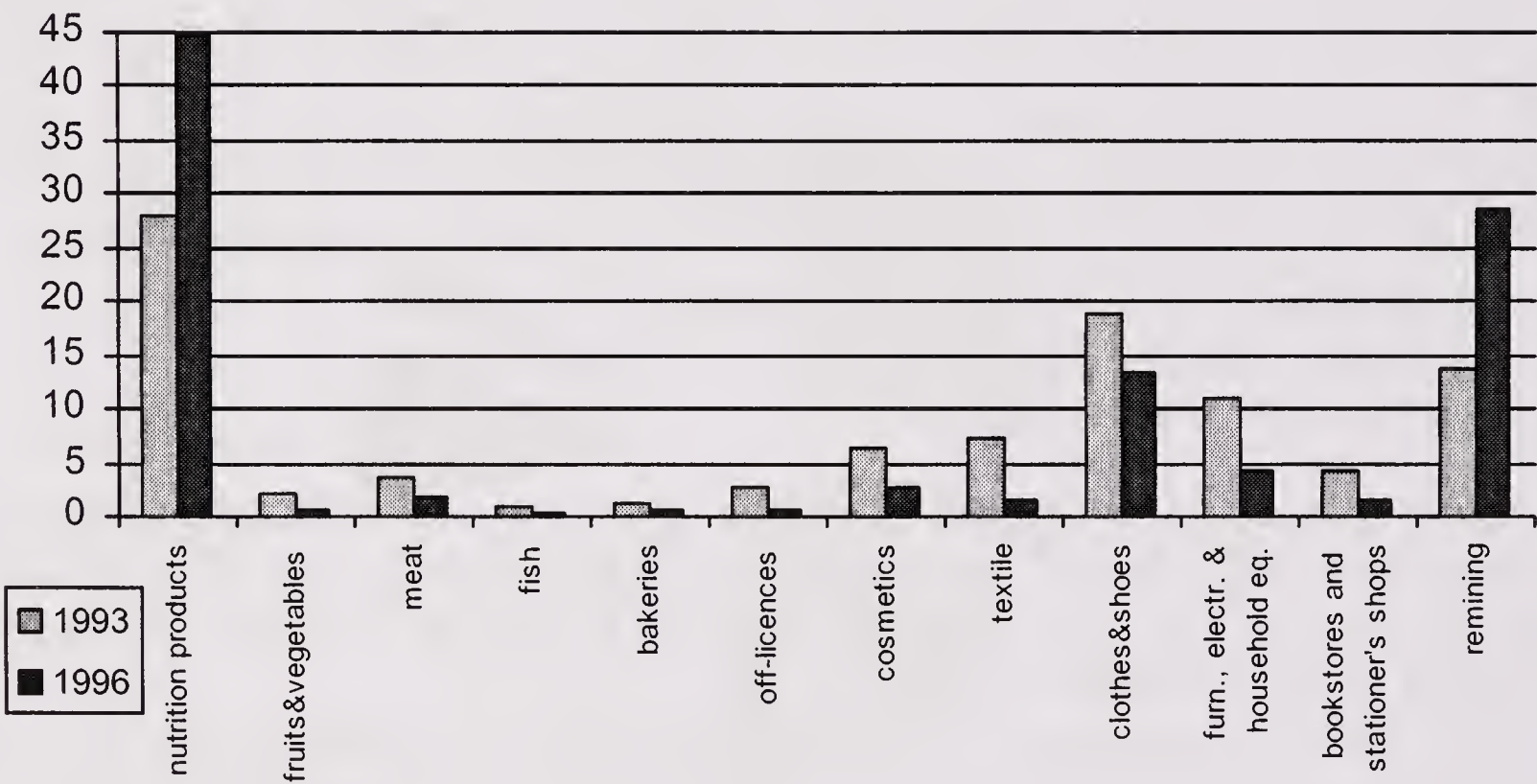
⁶ Within the market-places in the Chełm voivodship trade was run in 416 permanent sales points in 1993, from which 356 were opened every day (568 and 504 in 1996, accordingly). At the end of 1993, four permanent market-places functioned in Chełm (there were no seasonal ones), and three of them had a majority of retail sales. All of them were opened daily. Their area was 34057 m², and sales area – 29157 m². 244 permanent points of retail sale (that was 72.4% of all points of the Chełm voivodship) were found. At the end of 1996 there were the same number of permanent market-places in Chełm, and one more

1989 a large number of public market-places were established. They were often more competitive as far as the price was concerned in comparison to the shops. It was caused by lower payments than in the case of renting the offices for shops and connected with this: additional costs (energy etc.), as well as the frequent lack of fiscal burden when this economic activity was not registered. Finally, another phenomenon was noticed – smuggling. The regions near the border (like Chełm) were especially exposed to this kind of economic activity.

2.3. Changes in shops’ specialisation

The facts mentioned above show the structure of shops and demand for the exact groups of goods in a given year. However, it was sufficient to describe the changes in consumption patterns during transformation. A time perspective should be presented.

Figure 2. Structure of shops according to the specialisation of trade in the Chełm voivodship in 1993 and in 1996 (in %)



Sources: WUS (1994, p. 6), US (1997, pp. 9-11).

If the assumption that the structure of shops represents the structure of demand of the Chełm voivodship inhabitants and of its capital is true, the following conclusions should be drawn: the share of demand for global food products, and remained – not included in detailed statistics items, increased significantly (accordingly: from 28 to 44.6%, and from 13.8 to 28.5%). The last fact can be explained by the growth of the number of shops specialising in different goods that traditionally have occurred in statistics, and in addition to the changes in consumption demand were faster, than the changes in research methodology. It has also a wider meaning: during transformation the demand for a variety of goods, which were available on the market (with many difficulties), increased.

seasonable. They occupied the same area as three years earlier. The number of permanent points of retail sale grew up to 364. All of them were opened daily. See: US (1997, p. 18).

The third large group of shops was those selling clothes and shoes. Their share, however, went down in the course of three years by *c.* five percentage points. A bigger decrease (of about seven percentage points) referred fourth, regarding numbers of groups of shops specialising in the sale of furniture, electrical and household equipment. It can mean that the demand for these types of goods became satisfied, a characteristic of the first part of transformation (in anxiety for loss of value of money due to high inflation, people often bought durable goods). The decline also embraced the group of textile shops (about six percentage points).

This analysis concerned only three years in the later course of transformation. A wider time range should be discussed. In spite of changes in structure, the growth in the number of specialised shops in comparison to 1991 could be seen. Thus in 1996, in comparison to 1991 the number of global food shops grew up by *c.* 70%, the number of cosmetics shops by *c.* 180%, the number of shops with textiles, clothes and shoes by about 20%, whereas the number of shops selling furniture, electrical and household equipment went down by about 30%. This was caused by concentration of sales in large shops, by the progressive process of liquidation of the smaller ones (see also: US, 1997, p. 9).

2.4. Retail sales in the Chełm voivodship in 1991-96

There are some statistical data which present more accurate information about consumption in the Chełm voivodship. Unfortunately, they refer only to the sales in shops employing more than 20 persons. They could better represent the sales in cities (majority of bigger shops located there), but on the other hand, it eliminates all the small shops there.

According to the Statistical Office of the Chełm voivodship, sales of food reached 40.8% of general value of retail sale in 1993, alcoholic beverages 13.7%, and non-food-goods 45.5%.⁷ The largest group of food products in 1993 was the sale of meat and meat-products (32.4%), and breadstuffs and of confectioner's articles (29.2%). Among non-food-commodities, the greatest share had the sales of furniture, radio and television equipment, lighting and household equipment (28.3%) as well as clothing and shoes (20.0%) (US, 1997, p. 8).

More detailed information about trends in retail sales structure in Chełm can be traced by the analysis of the period 1991-1996 (table 2). In 1996 the value of retail sales of food, of alcoholic beverages and of non-food-commodities for individual consumers reached: 31.8%, 8.8%, and 59.4%, respectively.

The share of food sales increased until 1994, and then decreased, while participation of alcoholic beverages declined systematically from 23.9% in 1991 to 8.8% in 1996. The sale of non-food-consumable products fluctuated in different years within the range 18-25%.

⁷ Data originate from a statistical survey conducted by the Statistical Office of the Chełm Voivodship based on medium and large-sized companies (employing six and more people), as well as on the representative survey conducted among small-size companies (up to five employees). This survey referred to persons conducting registered economic activity or partnership in retail, wholesale – on the basis of confirmations of notification of activity economic, or in a form of civil partnership.

Table 2. Structure of retail sales in the Chełm voivodship ^{a)} (in %)

	1991	1992	1993	1994	1995	1996
Food	37.7	39.7	40.0	40.9	39.7	31.8
Alcoholic beverages	23.9	19.1	16.7	13.6	10.0	8.8
non-food-products:						
• consumable	24.4	25.2	24.9	22.5	18.1	22.5
• non-consumable ^{b)}	14.0	16.0	18.4	23.0	32.2	36.9
Total (value in thousands złotych)	65372.7	56426.2	61484.5	63748.8	86187.4	122996.6

Notes:

- a) Data concerns companies, where the number of employees exceeds 20 persons.
- b) Non-consumable products include these commodities, which are used mainly in production, especially commodities devoted to agricultural production (machines, pastures, manure etc.), building materials.

Source: US (1997, p. 22).

Table 3. Structure of sales in shops of the Chełm voivodship according to the goods assortment

	fruits & vegetables	meat and meat-products	fishes	bakeries	alcoholic beverages	remaining foodstuffs	pharmaceuticals	cosmetics	textiles	clothing	shoes and leather products	furniture and lighting eq.	household equipment	radios and TV sets	books, newspapers, stationeries	remaining non-food products
1991	0.9	12.2	2.3	8.5	13.4	9.0	0.0	2.4	2.8	5.5	4.9	3.3	5.7	5.0	3.5	20.6
1992	0.8	10.2	2.7	7.6	12.4	11.7	1.4	2.6	3.6	5.2	2.7	10.1	4.1	5.0	3.3	16.6
1993	0.7	12.8	2.0	11.9	13.7	13.4	2.9	2.9	3.4	4.9	4.2	6.3	3.6	3.0	0.9	13.4
1996	0.5	10.3	1.6	3.6 / 2.4	3.5	6.4	3.1	1.5	2.5	3.7	3.9	4.7	3.2	0.1	0.4	48.6

Notes: Data for years 1991-1993 are fully comparable. Data for 1996 contained positions which did not exist earlier: non-alcoholic beverages (1.3% – included by the author in the group of remaining foodstuffs), tobacco-products (1.6% – included in remaining non-food products), fuels (29.8% – as above). The items: breadstuffs and cereal processing, as well as sugar and confectioner's products, were separated.

Source: Data assembled by the Voivodship Statistical Office in Chełm based on representative inquiry of questioned shops. For years 1991-93: WUS (1994, pp. 16-17); for 1996: US (1997, pp. 20-21).

The share of non-food-non-consumable products grew constantly from 14% in 1991 to almost 40% in 1996. It could have been caused by the growing demand for durable goods, mainly in the production sphere.

During the beginning of the transformation process, it could be noticed that there was a significant fall of participation in sales: of fruits and vegetables, of fish and fish-products, of alcoholic beverages, of clothing, of radios and TV sets, of household equipment, of books, newspapers & magazines, and stationer's products. In 1996, the share of group of remaining non-food products increased significantly (however, it could be influenced by the changes in statistical categories).

2.5. Consumption of other goods

Consumption can be regarded not only in terms of commodities sold in shops. Part of it are also various expenses on the purchase of a flat and its maintenance (water, energy, telephone calls etc.), expenses connected with the purchase of a car, with culture, and so on. They are shown and analysed below (there is a lack of data on other expenses, like holidays, education etc.).

Table 4. Dwellings completed per 1000 people in the Chełm voivodship

	1975	1980	1985	1989	1990	1991	1992	1993	1994	1995	1996	1997
m	5.3	6.4	4.3	6.3	3.9	5.1	3.9	3.1	2.8	3.6	1.8	2.2
i	20.7	23.7	17.5	26.9	17.1	21.3	16.1	12.2	12.2	14.6	8.3	9.5
pu	329	409	321	506	317	371	287	228	228	269	165	185

Notes:

m – dwelling-places (flats)

i – rooms

pu – usable floor space in sq m

Source: US (1998, pp. LIV-LV).

In the period, which just preceded the system transformation, a high rate of dwellings (flats) increase was accounted. These were mainly the blocks of flats, built by cooperatives. 1989 was the last year when there was a growth in the number of rooms in use, over 22 per 1000 persons. In the worst, 1996, this indicator dropped to 8.3 rooms per 1000 persons, which was over three times less than in 1989. This trend of worsening the house-building situation in the Chełm voivodship is also confirmed by the number of flats in use per 1000 persons, and their usable space. Some numbers from 1998 also confirmed this trend.⁸ This process, which occurred and deepened in the second half of 2000 and the beginning of 2001 in the whole country, was a crisis of house building in Poland.

The purchase of a flat (or a house) is one of the most important households expenses. Important factors contributing to the change in the number of flats built are: credits interest rate, as most of them are purchased in an instalment system, as well as the possibility of tax reduction. Possession of a house or a flat is also connected to other expenses.

⁸ According to the author's calculations (which were necessary, because of the change of statistical methodology of collecting and publishing data in 1999), there were 6.27 rooms in use per 1000 people in 1998. If the structure of house building in the Chełm voivodship is similar to the Chełm county (originated in 1999 after administrative reform in Poland), there was an even bigger drop in the number of flats completed in 1998.

Until 1991, the use of water from cities’ water-supply systems increased systematically. Since then, according to the data available, it declined. This was caused by two main factors: the increase in prices, which – in the situation of the fall in personal income during transformation crisis – forced savings to be made, also by the rationalisation of use, made possible, in part, after the rather massive introduction of water-use meters, after introducing the new system of accounts in the blocks of flats owned by cooperatives.⁹

Table 5. The use of different goods in households per person in the city’s population in the Chełm voivodship

	1975	1980	1985	1989	1990	1991	1992	1993	1994	1995	1996	1997
ww	30.1	45.1	52.1	53.6	54.5	62.4	61.0	51.4	52.6	44.2	39.6	34.7
ee	230.8	337.4	525.0	601.3	655.6	638.9	556.2	501.8	578.1	537.5	532.4	523.3
gp	24.4	40.1	40.3	42.4	41.3	39.1
gs	-	-	-	0.1	2.0	7.6	35.6	33.8	53.9	83.4	84.6	99.1

Notes:

- ww – the use of water from the water-supply system in m³
- ee – the use of electricity in kwh
- gp – the use of liquid gas in m³
- gs – the use of gas from network in m³

Source: US (1998, pp. LIV-LV).

As far as the use of electricity is concerned, 1990 was the year of maximum use per person. Since then it declined (with the exception of 1993). On the other hand, the use of gas increased systematically. This was possible not only because gas was cheaper than coal and electricity, but primarily due to the installation of gas pipelines in the Chełm voivodship, not previously there.

The purchase of a car is another very significant event in the life of a household that burdens its budget for a long time (by credit and its repayment). The number of registered cars in the Chełm voivodship increased constantly; no matter how large the drop of real personal income was (at the beginning of transformation). Cars became an item that started to be available for every person with a substantial amount of money¹⁰, and often families, which could not afford to buy a flat, bought a car, in their opinion, a kind of substitute.

The next item of household expenses was the installation of telephones (or the purchase of a mobile phone) and the costs of phone calls (unit costs of phone calls decreased with the progress of demonopolisation of the telecommunication sector). The availability of telecommunication services has increased greatly in Poland since 1989. Between 1989 and 1997 the number of private subscribers to cable telephones (all of them at that time used services of Telekomunikacja Polska S.A., a monopolistic

⁹ Previously households living in blocks of flats paid according to the number of persons registered in the flat. After the introduction of water-meters, households paid only for the quantity they really used.

¹⁰ There were huge problems with receiving a kind of state permission to buy a car before 1989.

company) grew by almost three times.¹¹ The number of people permanently using telecommunication services is higher also because of the establishment and development of mobile telephone systems.

Table 6. Transportation and communication in the Chełm community

	1975	1980	1985	1989	1990	1991	1992	1993	1994	1995	1996	1997
So	13.5	37.5	61.8	75.4	87.8	102.1	122.4	131.7	139.0	144.6	157.9	173.3
At	10.6	23.1	33.0	48.9	52.1	60.1	72.2	75.0	79.2	103.1	129.5	141.7

Notes:

So – registered private personal cars (as of 31 December) per 1000 persons (since 1991 in private sector)

At – private subscribers of cable telephones (as of 31 December) per 1000 persons (having phones installed in private flats)

Source: US (1998, pp. LVIII-LIX).

Another item which has one of the least shares in household spending are the expenses connected with culture. A drop in the number of cinemas in the Chełm voivodship should be noted.

Table 7. The use of entertainment in the Chełm voivodship

	1975	1980	1985	1989	1990	1991	1992	1993	1994	1995	1996	1997
K	17	16	13	8	8	7	6	6	6	6	6	6
Kw	12	11	9	4	4	3	2	2	2	2	2	2
W	491.5	296.6	480.7	390.2	182.1	114.3	63.0	44.5	42.8	73.5	44.6	60.3
W'	2010	1288	2004	1589	738	462	254	179	172	294	178	242
Ar	47.4	50.3	60.1	69.0	68.1	67.0	68.6	69.1	68.5	66.0	65.4	64.3
At	33.4	45.4	57.0	62.1	61.1	60.1	62.2	63.0	62.4	60.4	59.5	59.3

Notes:

K – permanent cinemas in the Chełm voivodship (as of 31 December)

Kw – permanent cinemas in the country (as of 31 December)

W – cinemas' audience in thousands

W' – cinemas' audience per 1000 persons

Ar – radio subscribers (as of 31 December) in thousands

At – TV subscribers (as of 31 December) in thousands

Source: US (1998, pp. XXXVIII-XXXIX).

For the last several years, Chełm has had two cinemas.¹² These figures do not show any possible change in spending in entertainment. More detailed information should be derived from another source.

The number of permanent cinemas during a transformation period decreased considerably in the first part of this period. This is connected with the decrease of public funding as well as the drop in personal income level. The growth in audiences

¹¹ In 1998 there were 277 subscribers of cable telephones per 1000 persons and in 1999 – 302, almost 10% more than in the previous year (not only private subscribers). See: US (2000, pp. 20-21).

¹² Only one in 1998 and again two in 1999. There were another two in the remaining three cities in the Chełm voivodship during the last years.

can be seen since 1995, when the cinema crisis (connected with the level of society's wealth) was over. The years of the socialist system was the period of the biggest popularity of films, related to relatively low prices, a larger share of pupils in the audience, but also the lack of substitutes: television (controlled by the state at that time), and modern technologies (satellite antennas, videos, and cable TV).

Other smaller expenses of households' budget are the costs of radio and TV subscription. The number of radio subscribers has decreased (with fluctuations) since 1989. Since 1992, the number of TV subscribers decreased also. However, it is connected by the huge difficulties with enforcement of payment from subscribers, while some people noticing that opportunity, did not want to pay. This attitude may be caused by the willingness to save or to increase other goods of consumption.

One of the phenomena that emerged at the beginning of transformation was the development of market-places and their changed structure. The demand for purchasing there decreased in favour of shops. This was the result of increasing supply and reaching the balance between these two economic forces. Other reasons can be added: the growing standard of living (higher income led to an increase in the purchase of more expensive goods), the growing prices of commodities abroad, and a higher quality of customs protection (decreasing illegal import of tradable goods). However, the prices of commodities traded on those markets were often lower than in shops, and were sometimes of the same quality.

Another item, sometimes very important in some households, is alcoholic beverages. In former socialist countries, especially in Russia and in Poland, there was a relatively high consumption of strong alcohol per capita. During transformation, the price of alcohol went up, and due to the government economic policy of proper fiscal regulations, the price of vodka and other products with a higher share of alcohol in particular increased. Thus, the demand for beer increased and for vodka decreased, while the global consumption of alcoholic beverages decreased, too.

3. Consumption patterns during transition and their future trends – the case of Warsaw

This part of the analysis is based on a survey conducted in Warsaw in the summer of 1999. It looked at the richer groups of Warsaw's inhabitants. With the increase of welfare in Poland in the following years, those consumption patterns studied in Warsaw could be seen as a forecast of future average consumption patterns in the whole of Poland.

In the structure of consumption before 1989, the domination of the expenses for basic commodities, connected with current consumption was characteristic. The group of people questioned in 1999 in Warsaw stated that the domination of spending for durable commodities (a flat and its equipment, car, electric equipment – 36.9% of responses) occurred. A few reasons for this fact can be indicated. One is that the Polish economy overcame the transformation crisis, resulting in the growth of average personal income. The second is the occurrence of "postponed demand", which could not be met before 1989, due to the shortages in the economy. There were higher quality

commodities (part of them was imported). All of these factors led to the growth of expenses for durable goods.

The second large group of responses (32.3%) indicated domination of expenses connected with current consumption of basic commodities (food, clothes, and the maintenance of a flat). It can be interpreted as a result of the huge growth of these prices (leading Poland to the structure of expenditures similar to those of countries with a long tradition of market economy). Interesting also is the occurrence of responses indicating expenses connected with family and children.

The growing share (26.2% of responses of population questioned) of expenses connected with the consumption of luxury goods in households' budgets, like holidays, and the rest could be observed. There was a small share (3.1%) of spending on culture and education (books, newspapers, theatres).

Although there were people declaring huge expenses on current consumption, in many cases it was not the only answer given by respondents. The share of households, which can have savings and invest them (at stock exchange, own business) grew up (to 6.2%). There was still a big interest in durable goods (25.2% responses). The changes in structure of households' expenses are on figure 3.

Figure 3. Changes in structure of dominating households' expenses



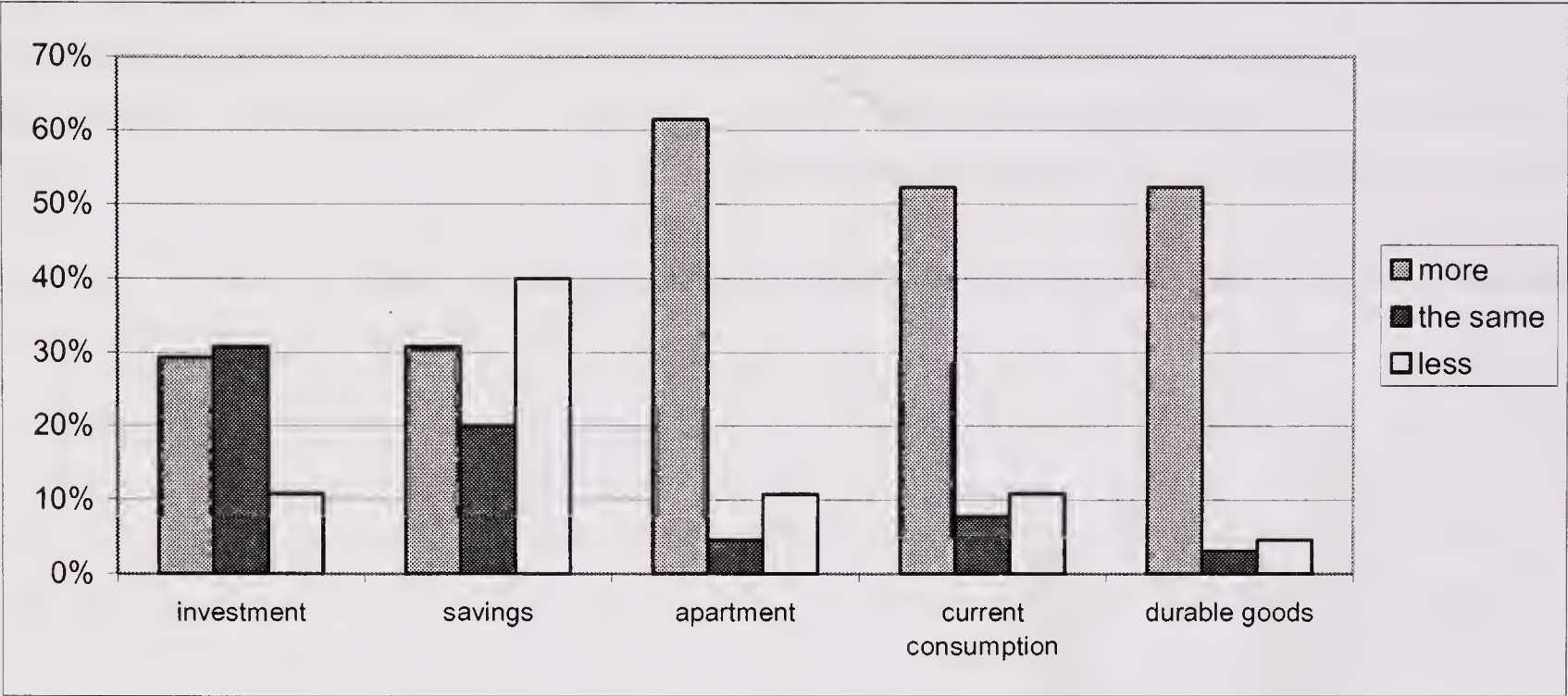
There is a very visible growth of expenses for durable goods and consumption of goods perceived as luxury. It means that in a few years there will be also an increase of purchases of those goods observed in the whole of Polish society. There are a few reasons for this. First, together with the growing level of wealth of Polish society, it is to be expected that such behaviour that is analogous to that observed in the subpopulation questioned (meeting the "demand hunger" for durable goods remained after the old system and later for other commodities and services). A growth of demand also originated from the growing role and size of the richest part of society (as well as the middle class during transformation).

The next figure shows opinions of households on the changes of the expenses structure. These confirm the information and conclusions derived from figure 3.

For the huge majority of respondents the most painful growth of expenses were those related to the maintenance of a flat (or a house). The growth of expenses on current consumption was rated not so negatively, because in this period also the quality of consumption increased, too (also of basic commodities), there was broader variety of available commodities and thanks to it, opportunities for spending money.

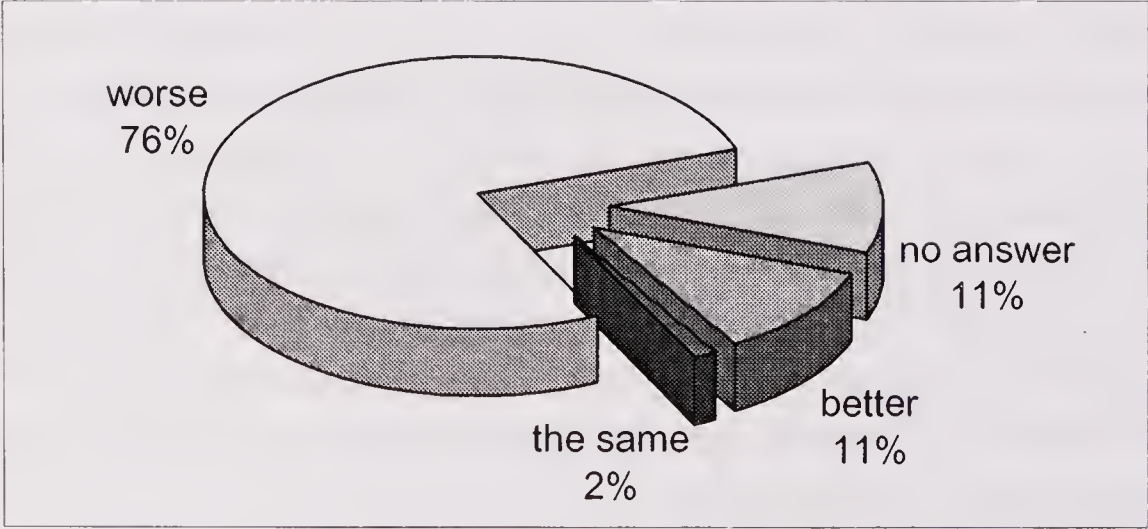
A significant improvement of the quality of the group questioned was also confirmed by the growth of a large part of household expenses for durable goods (for the reasons discussed above). The growth of income level influenced the growth of households' investment. It was also caused by the increase of possible ways of making those investments, like own business, stock exchange etc.

Figure 4. Households' opinions on the share of expenses in 1999 in comparison to the situation before 1989 (divided in five categories)



In the survey conducted, the respondents were also asked to compare their situation, as consumers, about 10 or more years earlier (the end of the old system) with their present situation (see figure 5).

Figure 5. Opinions about consumption in 1989 compared to 1999



Respondents agreed (86.21% of indications referring to exact answer) that previously their situation was worse. Among the reasons for this opinion, they

indicated: bad quality of service, worse availability to the goods and their low quality, shortages of goods' supply, queues in shops. The present situation means for respondents a wider choice and variety of commodities, better conditions for doing shopping. Free market and competition mechanisms were shown as a reason for changes that came into being. The only bigger problem for consumers was the matter of having a sufficient amount of money.

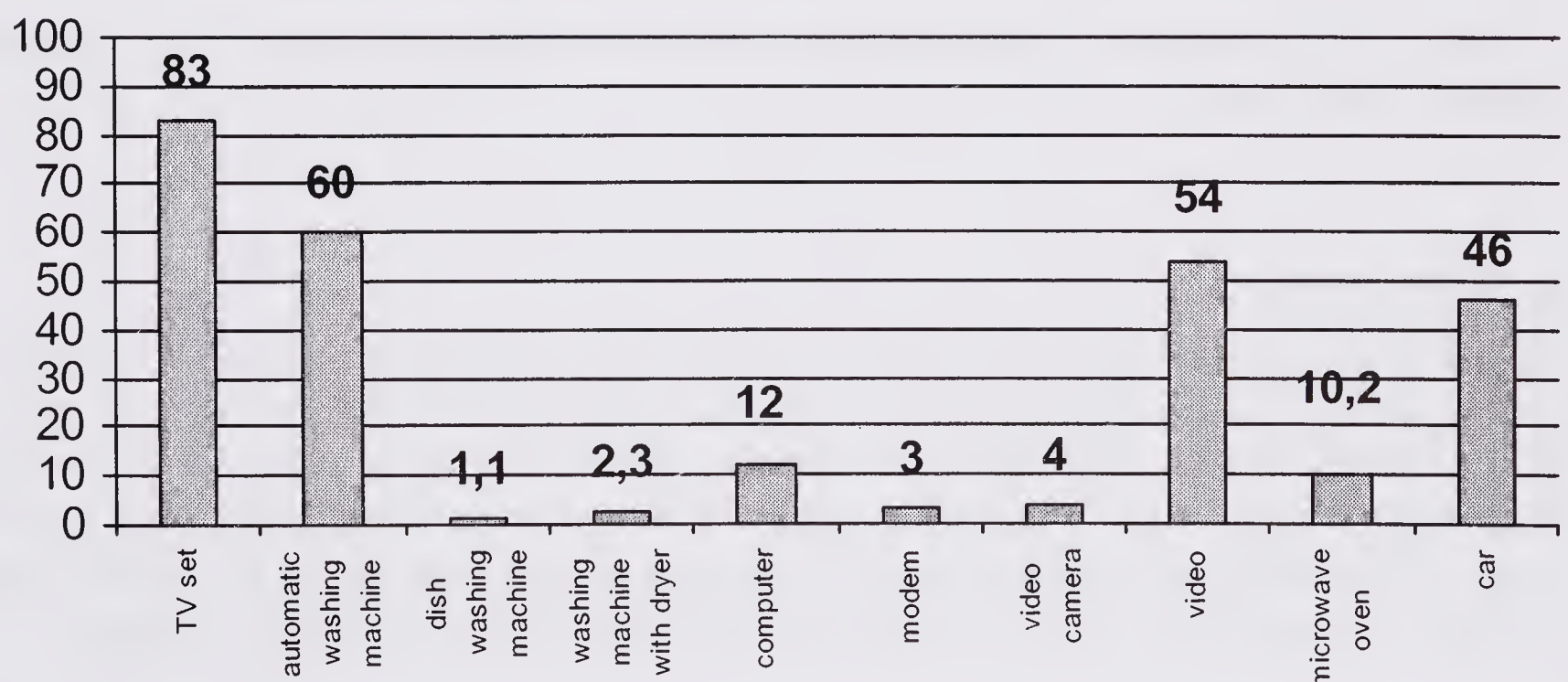
4. Prospects of consumption patterns in Poland

To discuss the future possible consumption patterns of Poland's citizens it is necessary to start from the basic analysis of the past and present situation. To do this, there should usually be a group of representative consumers chosen. In this survey, it was assumed that the society of Chełm (and if there was the lack of proper data – the society of the Chełm voivodship) represented Polish consumers, at least in main trends of changes during the transformation process. Later, some forecasts are usually made, using some quantitative methods, like extrapolation of time series, based on different trend lines or an econometric model. In this study another approach was chosen: the richer part of the richest subpopulation in Poland was investigated to approximate future consumption patterns.

There was no more detailed survey conducted in Chełm in the 1990s as far as consumption was concerned. But it was possible to base on a survey referring to the new Lublin voivodship. One of the latest surveys was conducted by Claritas Polska Sp. z o.o. (an American company doing market research in various countries).

One third of families in the Lublin voivodship do their shopping first of all in the nearest shop, one fourth mainly in supermarkets and one tenth – in the markets. The structure of household equipment is presented on figure 6.

Figure 6. Households' equipment in the Lublin voivodship in 2000 (according to Claritas Polska Sp. z o.o., in %)



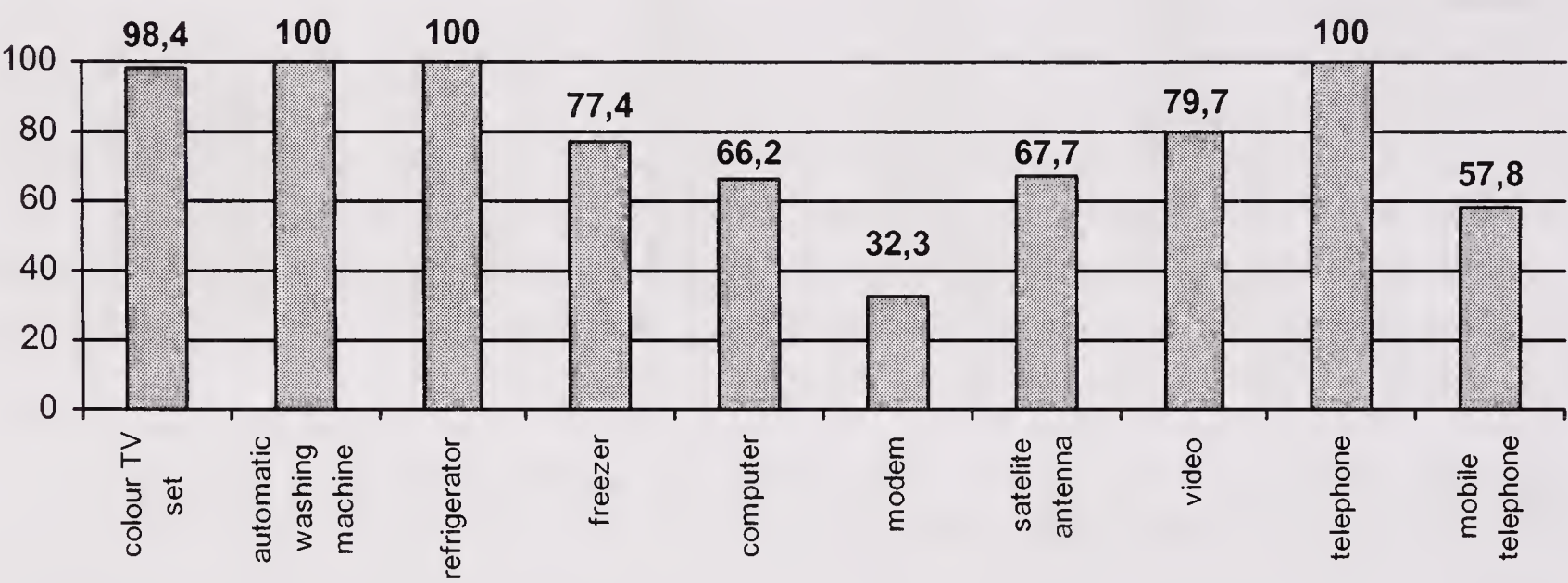
Source: 'Jak się żyje na Lubelszczyźnie' (2001, p. 6).

According to the Warsaw survey (figure 7), the share of all of household equipment was bigger. All respondents answered that their household had a refrigerator, an automatic washing machine, and a telephone. Only one person answered that he/she did not have a colour TV set (their own choice not because of financial difficulties).

Comparing these two groups (although the results of these surveys are not fully comparable, because of different methodologies and different groups of goods analysed), the conclusions should be drawn that there will be an increase in the following commodities, listed in the order of possible potential demand (approximated by the gap between corresponding groups of goods from figure 7, 6):

- 1. computers,
- 2. automatic washing machines,
- 3. modems (allowing access to Internet),
- 4. video,
- 5. TV sets (mainly colour ones).

Figure 7. Household equipment in a wealthier part of Warsaw (survey in Warsaw in 1999, in %)



There will be also a slight increase of dish washing machines and washing machines with dryers.

5. Conclusions

The article based mainly on two sources of information: statistical data from or related to the Chełm voivodship and empirical survey on consumption of the richer part of one of the richest cities in Poland. The results show an increase of personal (and household) income, level of education and the share of society employed in the private sector. The household equipment of Polish society will increase in the direction shown on figure 7, according to the ranking presented (at the end of the previous chapter).

References:

- Chmielewski, T., Piech, K. (2000), 'Konsumpcja w Polsce w okresie transformacji – wybrane wyniki badań empirycznych', *Studia i Prace Kolegium Zarządzania i Finansów*, no. 14, SGH, Warsaw, pp. 196-203.
- Kresy (2001), 'Jak się żyje na Lubelszczyźnie', *Kresy – Tygodnik Chełmski*, 7 January, no 1, p. 6.
- US (1997), *Handel wewnętrzny w województwie chełmskim w latach 1991-1996 r.*, Urząd Statystyczny w Chełmie, Chełm, August.
- (1998), *Rocznik statystyczny województwa chełmskiego*, Urząd Statystyczny w Chełmie, Chełm.
- (2000), *Statystyka powiatów i gospodarki samorządowej województwa lubelskiego w 1999 r.*, Urząd Statystyczny w Lublinie, November.
- WUS (1994), *Handel wewnętrzny w województwie chełmskim w 1993 r.*, Wojewódzki Urząd Statystyczny w Chełmie, Chełm, September.

Poland as the Insurance Market Leader among Countries of the Visegrad Group

Tomasz Bernat

Economic insurance is one of the most rapidly developing fields in the economy of both Poland and other countries of the Visegrad Group. The changes were triggered by the system transformation, which took place in the early nineties in the Central and East European countries (Jaworski 1998, p. 44). At present, further alterations are aimed at bringing the structure and function range of these markets in line with European standards (Devuyst *et al.*, 2002). The development of the financial sector, inclusive of the insurance one, resulted, among other things, from the decline in insurance services present until the system transformation, commercialisation and demonopolisation of the market, aggressiveness of marketing policies, and from the introduction of new insurance regulations which adjusted them to the norms of the European Union (Hołowiński, 1994, p. 188 and next; Moavero Milanesi and Winterstein, 2002). It is particularly visible where monopolistic framework has been replaced with a more competitive market with shares held by global companies that function and compete in numerous countries (Feldstein 1997; Szymański, 2001, p. 95). It is also applicable to markets of insurance institutions¹. The objective of the following dissertation is to present and to evaluate the insurance market in the countries of Central and Eastern Europe, which are striving to gain membership in the European Union. The macroeconomic data available for the countries examined paint a positive picture. Apart from a temporary decline in the economic situation and short-lived crises, all of the countries experienced an economic growth at the turn of the twentieth and twenty-first century. The assessment may be based on significant indices of economic expansion like the dynamics of gross domestic product, rate of unemployment, economic foreign relations, and inflation (Samuelson and Nordhaus, 1996, p. 134). In the following study only two of them will be used, namely GDP and inflation. GDP is one of the most synthetic measures of development of the whole economy (Zienkowski, 2001, p. 16). Its values are presented in table 1.

Table 1. Gross domestic product dynamics in Visegrad Group’s countries.

Country	1994	1995	1996	1997	1998	1999	2000
Poland	5	7	6	7	5	4	4
Czech Republic	3	6	5	-1	-1	0	3
Hungary	3	2	1	5	5	4	5
Slovakia	5	7	7	6	4	2	2
Slovenia	5	4	4	5	4	5	5

Source: GUS (2001).

¹ Insurance markets are penetrated by foreign investments to different extents. In some countries the predominant entities are domestic companies (usually former monopolists) e.g. in Poland, whereas in others the market is subjugated by foreign capital e.g. in Hungary. Compare: Jaworski (1998, pp. 46-47).

Figures presented in table 1 and on figure 1 clearly demonstrate that the countries examined worked out a positive GDP for most years. The sole exception is the Czech Republic, which during the period 1997–1998 experienced a fall in production growth. These were symptoms of a crisis, brought under control though in the following years.

Another important criterion for our assessment is inflation. The rate of price growth in the countries examined is presented in table 2.

Table 2. Coefficient of inflation in years 1994-2000 in Visegrad Group’s countries

Country	1994	1995	1996	1997	1998	1999	2000
Poland	32	28	20	15	12	7	10
Czech Republic	10	9	9	8	11	2	4
Hungary	19	28	24	18	14	10	10
Slovakia	13	10	6	6	7	11	12
Slovenia	21	13	10	8	8	6	9

Source: author’s elaboration based on GUS (2001).

Data presented (table 2, figure 2) indicate that all the countries of our scope have been successfully struggling to beat inflation. Only Slovakia has had significant problems in recent years with retaining the decrease in inflation². The other countries are visibly aiming at adjusting themselves to the norms imposed by the European Union. Let us now briefly examine the situation of Poland with regard to the above-mentioned criteria. In the period analysed, Poland recorded a stable growth in gross domestic product³. The other nations suffered at different points brief (two-, three-year) setbacks of the economic growth pace. Inflation remained at a relatively high level, it did, however, tend to decrease, which consequently brought about a low rate of price increase in the period 2001-2002.

The above data visibly indicate that economies of the countries discussed do exhibit steady growth tendencies. It holds true, however, to all the sectors. Let us now investigate the insurance market in the countries analysed in respect of the aforementioned data.

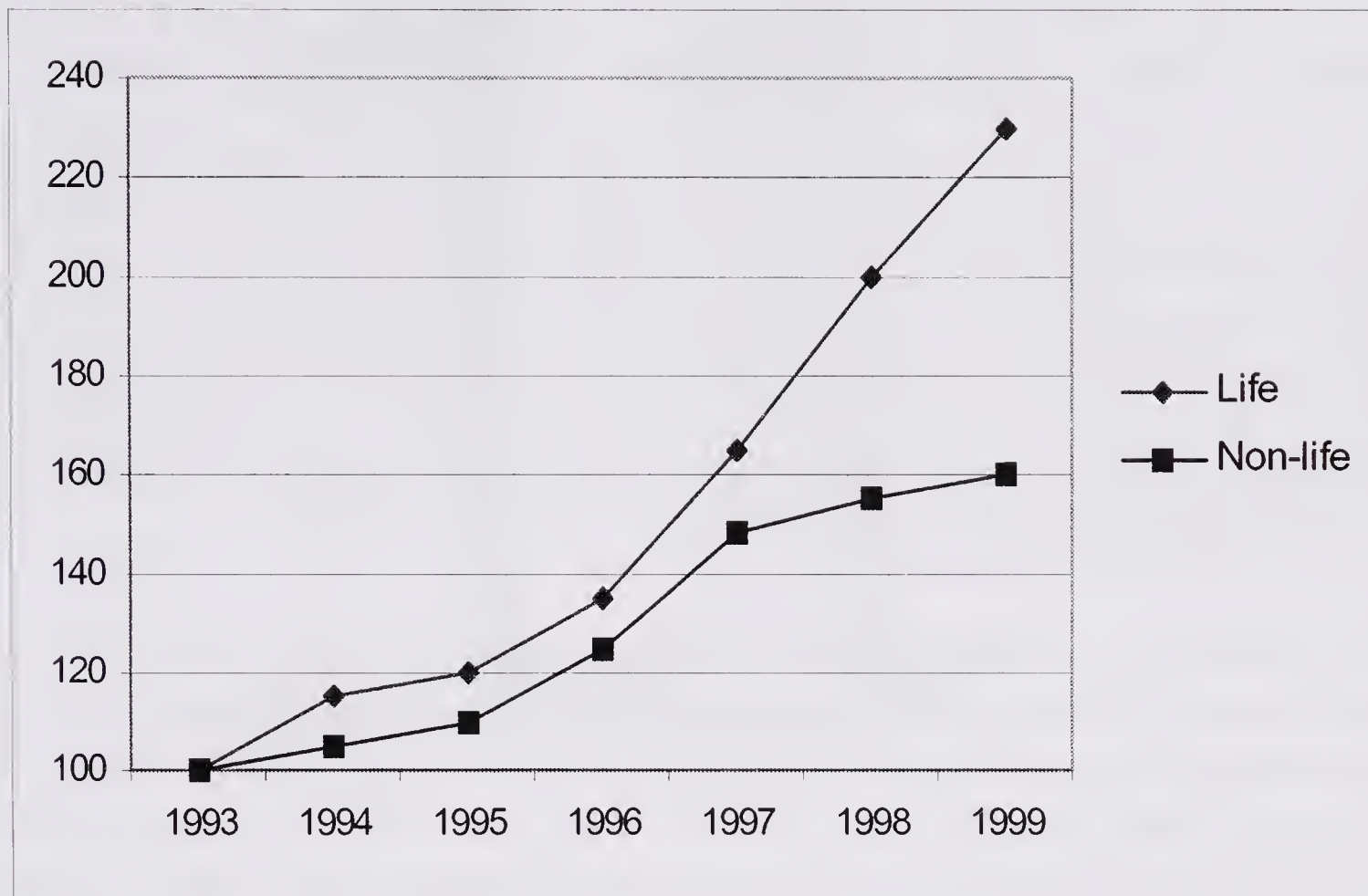
The insurance sector in the period examined has been one of the most rapidly expanding ones (Sangowski, 2000, p. 43). It results from a number of reasons, some of which are (Jaworski, 1998, p. 56; Bernat, 2001, p. 946):

- low saturation with insurance products at the beginning of system transformation,
- increasing purchasing power of home currency,
- market penetration by foreign competition,
- aggressive advertising policies,
- increasing number of insurance products which cater for customers’ more and more diverse needs,
- increasing insurance awareness.

² In the case of Poland, inflation reached a very high level in 2000, only to fall sharply in the following years.

³ Yet, in the following year and in 2002, a considerable fall in the growth rate of GDP became visible. It was a symptom of significant decline in economic expansion.

Figure 1. Real premium volume in Visegrad countries with regard to life and non-life insurance



Source: Sigma 1/2001, Swiss Re, p. 11.

The insurance market in Central and Eastern Europe⁴ achieved during the period 1997-1999 premium volume of approximately US\$ 15 billion, equivalent to just under 1% of premium income worldwide. Five countries of the Visegrad Group made up over 60% of this amount, which means more than US\$ 500 billion. These values can be accounted for by dynamic expansion of the insurance market in the nineties. It seems necessary, however, to highlight the uneven development pace of the two main parts of the insurance market, namely life and non-life insurance. Level of growth of these two kinds is presented below on figure 1.

Figure 1 visibly indicates that the life insurance sector has been expanding much faster. It results first of all from the emergence of a modern life insurance market, greater insurance awareness, and from an increase in real income of citizens in the countries examined. The above synthetic data do not show, however, the degree to which particular countries contributed to the general expansion of the insurance market on the whole. The structure of premium growth during the period 1993-1999 is detailed below in table 3.

Figures in table 3 do confirm the earlier mentioned assumption of more dynamic development of life, rather than non-life, insurance. As far as the former is concerned, during the period 1993-1999 Slovenia achieved the fastest growth pace (26.2%) whereas the Czech Republic the slowest (10.2%). Considering the growth in non-life insurance, Poland recorded the fastest pace of expansion (11.5%) while in Slovakia the demand for insurance fell by -7.5%.

⁴ The data are applicable to all the countries in the region. Compare: Sigma (1998, 2001), Swiss Re.

Table 3. Insurance growth in examined countries

Country	Life insurance				Non-life insurance			
	In US\$ millions 1999	1993-1999*	1998	1999	In US\$ millions 1999	1993-1999*	1998	1999
Poland	1484	16.4%	18.5%	21.6%	3041	11.5%	6.5%	7.9%
Czech Rep.	576	10.2%	7.4%	29.3%	1231	9.6%	3.6%	4.1%
Hungary	507	16.0%	22.6%	21.6%	748	1.5%	3.3%	4.6%
Slovakia	207	17.5%	28.8%	19.3%	366	7.0%	13.3%	-7.5%
Slovenia	159	26.2%	8.7%	12.1%	567	5.1%	4.7%	0.1%
Total	2933	15.6%	16.9%	22.3%	5952	8.4%	5.8%	4.9%

Notes: averaged real premium growth per annum.

Source: Sigma (2001), Swiss Re, p. 12.

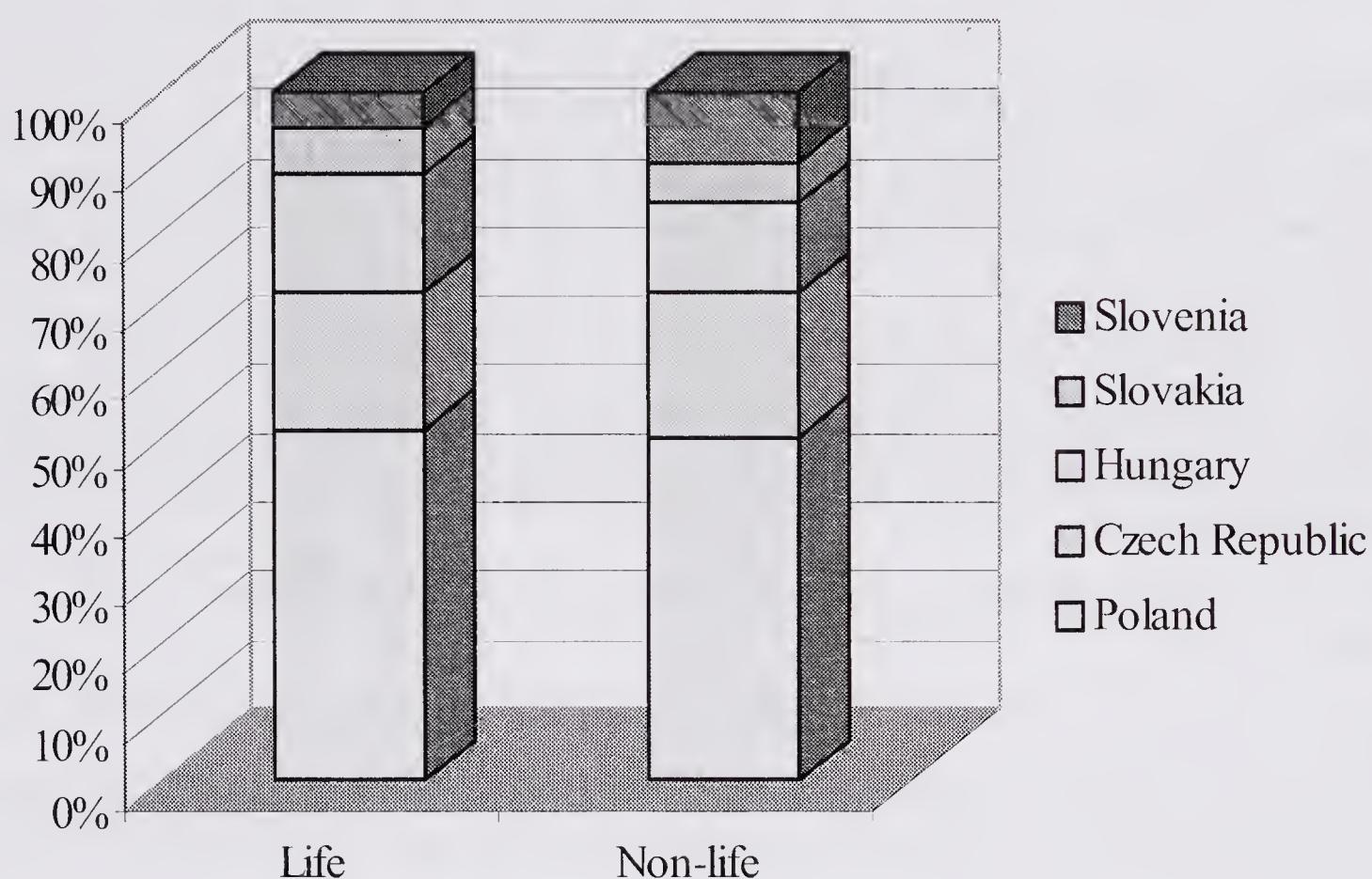
It is interesting to notice that in countries of the European Union, the relation between the two aforementioned components of the insurance market (with regard to premium volume) is exactly the opposite. In countries of the Visegrad Group, non-life sector is much bigger in terms of premium volume and income of non-life insurers is twice as big as income of life insurers. In the European Union, total life insurance premium is almost double when compared with the non-life sector⁵. The growth rate of premium volume in both sectors was lower, however, in comparison with the countries of our interest. It amounted to 9.6% in life insurance (in proportion to 15.6%) and to 1.7% in non-life sector (compared to 8.4%).

Although it cannot boast the highest rate of growth in premium volume, Poland continuously manages to sustain its leadership among the countries analysed. It can be proved by the total premium volume of US\$ 4.5 billion and by the fastest pace of market expansion during the nineties. The growth rate of life insurance premium averaged above 16% whereas non-life insurance over 11% above the inflation level. These values greatly surpass results achieved by insurance companies in highly developed countries. The growth pace of particular market constituents both in Poland and in the other countries suggest that if it manages to be maintained (the proportion at least), insurance markets in Central and Eastern Europe are likely to reach the standards of those in economically developed countries. The life insurance market will come to play a vital role then.

Apart from growth rate, the size of insurance markets in particular countries is an important means of further estimation. It is presented above in table 3. On analysing the data it becomes evident that Poland is a dominant country with regard to premium volume. Let us then examine what, in this respect, the framework of the insurance market is like in the countries studied. Figure 2 presents the proportions.

Figure 2 presents Poland as a leader on the insurance market among other countries of the Visegrad Group. Both in the life and non-life sector the total premium volume reached over 50%. This makes Poland not only a front-runner but also a country attractive to foreign investors.

⁵ Premium volume of life insurance amounted to US\$ 434,065 bn, whereas of non-life US\$ 268,666 bn.

Figure 2. Insurance market shares in the countries examined

Source: Sigma 1/2001, Swiss Some, p. 13.

Such a state of affairs results from a number of reasons (Douglas, 1990; Tillson, 1996), like a high rate of economic growth⁶, sharp and steady fall in inflation, large population, influx of foreign capital, increasing market competition, improvement of legal norms of both market insurance functioning and functioning of economy on the whole, legal and economic changes aimed at catching up with European standards.

The insurance market constitutes an important part of the economy of each country and Poland is not an exception. Data concerning the country's development as well as expansion of the insurance market clearly indicate that in Poland it has been developing very rapidly. The situation is similar in other countries of the Visegrad Group. In this environment Poland has been an unquestionable leader judging from the growth rate, the size of the insurance market, and from the condition of the economy on the whole. Further alterations, which should introduce economic conditions even more competitive than those in the remaining countries of the Visegrad Group, might cause the growth rate of both the country's economy and of its insurance market to be retained or even enhanced. It depends, however, on a number of factors including the condition of the world economy, the course of globalisation (*Economist*, 1997), and, in particular, on actions of the state (government) (Fitzgeralds, 2002). Still, it is difficult to anticipate directions of further changeovers on the market. Up to this point, some of the Polish government decisions and laws passed in the Polish parliament seem to be incompatible with these healthy rules of economic prosperity and expansion (Wilczyński, 2002a, 2002b; Orłowski, 2002; Balcerowicz, 2002). One should not renounce hope, however, that the market will stand up for itself.

⁶ It holds true for the period 1994-2000, after which economic growth rate fell to the level of 0,5% p.a.

References:

- Balcerowicz, L. (2002), 'Pieniądz jako kopalina', *Wprost*, no. 37.
- Bernat T. (2001), 'Konkurencja na rynku ubezpieczeń', in: Bernat, T. (ed.), *Konkurencja: mity i fakty*, Warsaw School of Economics, Warszawa-Kraków-Szczecin.
- 'Central European Cover Story', *Economist* 1997, Vol. 345, Issue 8037.
- Devuyst Y., Känkänen, J., Lindberg, P., Orssich, I., Roebeling, G. (2002), 'EU enlargement and competition policy: where are we now?', *Competition Policy Newsletter*, no. 1.
- Douglas A. (1990), 'Exploring Export Frontiers', *Canadian Business Review*, Vol. 17, Issue 2.
- Feldstein, M. (1997), 'The case for privatization', *Foreign Affairs*, Vol. 76, Issue 4.
- Fitzgerald E.M. (2002), 'Identifying variables of entrepreneurship, privatization, and competitive skills in Central Europe: a survey design', *Competitiveness Review*, no. 12.
- GUS (2001), *Rocznik Statystyczny*, Główny Urząd Statystyczny, Warsaw 2001.
- Hołowiński J., 'Przemysł ubezpieczeniowy w Polsce a zasady liberalizmu gospodarczego EWG', in: Wąsiewicz, A. (1994), *Ubezpieczenia w gospodarce rynkowej*, tom 2, Branta, Bydgoszcz.
- Jaworski, W. (1998), 'Rozwój rynków ubezpieczeniowych Europy Środkowowschodniej', in: Sangowski, T. (ed.), *Studia ubezpieczeniowe*, Wydawnictwo Akademii Ekonomicznej w Poznaniu, Poznań.
- Moavero Milanesi, E., Winterstein, A. (2002), 'Minority shareholdings, interlocking directorships and the EC Competition, Rules – Recent Commission practice', *Competition Policy Newsletter*, no. 1.
- Orłowski, W., 'Zagadkowy budżet', *BusinessWeek Polska*, no. 10.
- Samuelson, P., Nordhaus, W. (1996), *Ekonomia*, tom 1, PWN, Warszawa.
- Sangowski, T. (ed.) (2000), *Vademecum ubezpieczeń gospodarczych*, Saga Print, Poznań.
- Sigma* no. 1, 2001.
- Sigma* no. 7, 1998.
- Swiss Re*, www.swissre.com.
- Szymański, W. (2001), *Globalizacja. Wyzwania i zagrożenia*, Difin, Warszawa.
- Tillson, T. (1996), 'Great Business Ideas Buy Now, Litigate Later', *Canadian Business*, Vol. 69, Issue 15.
- Wilczyński, W. (2002a), 'Budżet na kredyt', *Wprost*, no. 39.
- Wilczyński, W. (2002b), 'Mikro i makro', *Wprost*, no. 43.
- Zienkowski, L. (2001), *Co to jest PKB?*, Dom Wydawniczy ELIPSA, Warszawa.

Regional Policy and SMEs in Zlin Region

Marek Beran and Kamil Dobeš

This article is divided into three main parts. In the beginning the authors describe problems of regional policy and structural funds of the EU. The second part shows the region of Zlín from the regional policy perspective. The economic characteristics are also described here. The last part focuses on SMEs and their role in a society. First, the authors define this term from the European point of view, showing the advantages and disadvantages. Then the globalisation problems as well as the role of marketing in the SMEs are briefly explained.

1. Regional policy

1.1. The term “region”

Region is, according to the common encyclopedic dictionary, defined as “part of the earth’s surface with specific typical features” (VE, 1997). Because the definition of the region could be shown in different contexts, the Council of Europe defined regionalism in Europe as follows: “The term region is described differently in different countries, but in general it is a human community, that lives within the frame of a bigger territorial entity. This community can be characterised by certain historic, cultural, geographical or economic homogeneity, or by the combination of these characteristics that gives the population a unity of common aims, features and interests.” (Waigel, 1997)

In the case of a region, it is the territory under the level of the state. The region has to consist of its own state or/and other independent organisational structure. Of course, there are very different variations in size, population, economic and political importance.

In respect of the European structural funds aid, the whole of the Czech Republic can also be partly counted as a region (Czerná, 1999, 1999a).

1.2. Development and position of the regional policy in the EU content

Regional policy is one of the top priorities of European policy and a better economic policy system of the EU. This can be justified simply by the amount of money spent on reaching the regional and structural aims. And in the long-term perspective, it comes second just after agricultural policy. During the last few years, it has reached about 40% of the total EU budget expenses.

The main aim of most European countries is the development of support for problematic regions, together with the effort for inter-regional divergence reduction. It is based mostly on the fact that restructalisation strains the regional development so immensely, that the regions are not able to manage the necessary structural changes on their own. From the point of view of the national economy, it is better to provide

regions with the biggest structural changes and regional aid for this restructuralisation, as well as the competition activity support, than to pay out grants for maintenance of branches and companies in danger, or to take some protectionist measures. Hand in hand with this disposal of targeted regional disparities reduction the other aim of state capacity in all state regions is monitored (as well as the effective allocation of regional resources) to maximise national economy efficiency (Had and Urban, 1997; ČR, 1998).

2. Regional policy in the Zlin region

2.1. Territorial characteristics

Since 1 January 2000, the Czech Republic has been newly divided into 14 regions. We will focus on the Zlin Region. This region is situated in the eastern part of the republic, bordering on the Jihomoravsky Region in the south-west, the Olomoucky Region in the north-west and with the Moravskoslezsky Region in the north-east. It also has a state frontier with Slovakia (Trencinsky and Zilinsky Regions).

The Zlin Region consists of four districts: Kromeriz, Uherske Hradiste, Vsetin and Zlin. The total number of municipalities is 304, of which 28 are towns. The overall area is 3,964 km² (5% of the Czech Republic area). About 597,842 people live in this region (150,8 inhabitants/km² – 5th place in the Czech Republic). In comparison with other regions, the Zlin Region has the third smallest surface area (see more in table 1).

Table 1. District Population in the Zlin Region

District	Population	Men	Women	Area in km ²	Municipalities
Zlín	196 723	95 539	101 184	1 031	82
Uherské Hradiště	145 577	71 011	74 566	992	78
Vsetín	148 377	72 690	75 687	1 141	58
Kroměříž	108 754	52 800	55 954	800	79
Celkem	599 431	292 040	307 391	3 964	297
Czech Republic	10 299 125			78 867	6 234

Source: *Regionální...* (1998), p. 22.

A total of eight cohesion regions were set up in the Czech Republic together with the coordination and realisation of economic and social policy and the use of structural funds – so called NUTS II. The Zlin Region together with Olomoucky Region creates NUTS II called Stredni Morava (METOD..., 2002).

2.2. Economic characteristics of the region

General economic features of the region are shown in the tables below.

The Zlin Region reaches the lowest points according to the GDP. Also the GDP per capita in the Czech Republic is very low, reaching 57% of the EU average.

Table 2. Economic features of the region

	Year	Zlin Region	Czech Rep.
GDP in Region (mln CZK)	1995	70196	1381049
	1996	77010	1572257
	1997	85721	1668859
	1999	91411	1887325
GDP / No. of unemployed (in thous. CZK)	1995	406,0	442,1
	1996	465,4	519,0
	1997	439,1	481,9
GDP/Region Population (in thous. CZK)	1995	116,9	133,8
	1996	128,3	152,5
	1997	143,0	162,0

Source: ČSÚ and METOD... (2002).

Table 3. Gross domestic product of Zlin Region and the Czech Republic

	Year	Zlin Region	Czech Rep.
GDP participation in %	1994	5,3	100
	1995	5,1	100
	1996	4,9	100
	1997	5,1	100
	1998	5,0	100
	1999	4,8	100
GDP per capita in PPS (EUR15 = 100)	1994	54,73	59,94
	1995	55,42	63,43
	1996	55,69	66,16
	1997	57,25	64,99

Source: ČSÚ and METOD... (2002).

2.3. Regional policy evaluation and its development in the Zlin Region

Regional policy evaluation in our region could be very simple. One argument is that there is a lot of regions (14). Eight would be sufficient. A division into 14 regions does not respect historical layout, and for the EU our regions appear to be too small, etc. The fact is that a smaller amount of regions would mean lower administrative costs (e.g. regional authority, institutional building). If we look now at more radical regional policy changes in the Czech Republic, the trace could lead into 1996. In 1989-1996 regional policy was not the priority of economic policy. It could not be, because our government had to cope with more difficult tasks and differences between regions were lower (e.g. unemployment).

The breaking point came after the elections in 1996 when the new Ministry of Regional Development was founded. Pressure for regional policy improvement was exerted by the European Commission in its first paper called Progress Towards the

Accession, where the regional policy of the Czech Republic was evaluated negatively. Since then, marked progress in this area has been made.

In looking at the regional policy, we have to differentiate two points of view. From the EU point of view, the Czech Republic as a whole is one region that fulfills the criteria for EU regional policy support. As for the bigger differences inside the republic, they are of government results and responsibilities. We can say that if there are problems in the region, the government should help in solving them. For this reason we think there should have been better decentralisation.

A positive fact is that regional policy continuity can be seen even in the next electoral term in the Czech Republic, which is important, especially in this electoral year.

Regional development conception of the Czech Republic, as well as the regions, is based on the following papers:

- a) The strategy of regional development of the Czech Republic and government decree No. 235/98 about government regional policy guidelines.
- b) The regional development plan of the Czech Republic (government decree No. 417/98 for institutional framework of the Czech Republic participation in the EU structural funds and EU regulations for use of structural funds EC 98/0090).
- c) Regional development programmes for pilot regions (government decree No. 235/98).¹
- d) Regional development law No. 248/2000.

As for the new Zlin regional authority, more information can be found at <http://www.kr-zlinsky.cz> or <http://www.zlinsky-kraj.cz>. Generally, this authority, as well as the whole region, can be characterised as very forward-looking with high industrial and spiritual potential.

3. SME in the Zlin Region

3.1. Specification of SME within the EU

This article uses the definition of small and medium enterprises as specified by the European Commission. This definition is recommended for the member countries of the EU, by the European Investment Bank and European Investment Fund. At the same time it functions also as a framework for programmes, policy and regulations valid inside the EU in the sphere of small and medium enterprises. It has been in use since 1 January 1998.

This measure has a form of recommendation and joins together the following criteria:

- number of employees,
- turnover,
- balance of trade,
- independence.

¹ More see e.g. the Czech Republic government decree from 26 October 1998 No. 707 about determination of territorial entities NUTS in the Czech territory for statistical and analytical needs of the EU. See: *Verejna sprava*, 1999, No. 1, p. I-VIII; Prančl (1999).

According to this recommendation, companies can be divided into: the smallest enterprises with less than 10 employees, small enterprises with 10-49 employees and annual turnover up to 7 million euros and medium enterprises with 50-250 employees and annual turnover up to 40 million euros.

In addition, all companies have to fulfill the independence criteria, i.e. a company may be owned by larger companies up to 25% of its share only (EURO – info, 1996).

3.2. Advantages and disadvantages of SME

Let us have a look at advantages and disadvantages of SME according to Barrow.

Advantages include:

- simpler structure,
- higher flexibility,
- higher sensitivity to market needs,
- individual approach to the customer,
- active participation in the innovative process,
- creating new job opportunities, which encourages economic growth; ensuring social standards, lowering the costs using subcontractors, and small production.

Disadvantages include:

- low market share of SME,
- lack of capital,
- bad orientation in administrative, legislative and tax regulations,
- uneasy access to public orders,
- problems with participating in research projects,
- difficult penetration into foreign markets,
- observing the regulations connected with higher costs.

One of the positive aspects of the present day, is the wide range of technologies accessible even for small companies, due to the Internet and the on-line databases.

A typical feature of small companies lies in their long-term survival on the market. Small companies are founded at an increasing pace, however the majority go bankrupt in the first few years of their existence (Barrow, 1992).

3.3. The impact of globalisation on SME

We live in times of mergers resulting in companies becoming larger and stronger economic units. This can be seen, for example, in the car industry (German Daimler-Benz and American Chrysler), food industry (Grand Metropolitan and Guinness) or in banking and insurance (Deutsche Bank and Bankers Trust), where huge financial institutions with enormous capital have emerged.

This may suggest that economic growth is determined exclusively by big global enterprises which rule not only over the amount of investment, but also over their placement.

In spite of this fact, a dynamic growth of SME can be seen in all industrial countries. SME are crucial and dynamic elements of the economy. Inside the EU small

companies (under 20 employees) represent 94% of the total number of companies and employ over 33% of all employees.

The potential of SME has been increasing and has become important even for large enterprises. SME can be faster in their production and organisation flexibility and exploit resources more consequently, which leads to better market realisation and innovation (Murphy, 1996).

3.4. Marketing SME

Marketing is frequently perceived as a tool for creating clever strategies in selling products. It is often reduced to advertising and sales. For this reason it is often located in the sales department even though the aims of the marketing and sales department differ substantially.

Company managers should be capable of identifying the needs of a customer and finding a solution profitable both for the customer and the firm. This can be achieved by innovating products, increasing the quality and value, and good service. If these are not the objectives of the management, then no advertising campaign or sales support can save it.

The understanding of competition is thus marked by the battle for the low price of a product, instead of increasing the value of the product.

Every company which desires to be competitive and prosperous in a long-term cannot rely on sales only; it must invest and find ways of increasing the value of its products or create completely new ones according to the customers needs (Glogar, 1999); Kotler, 1995).

In 1999, a field study was carried out in the Zlin region. It included four districts: Zlin, Uherske Hradiste, Vsetin a Kromeriz and focused on the area of companies marketing. The sample accounted for 324 items. 168 items were small companies up to 19 employees, 56 had 20-49 employees, 63 had 50-250 employees, and 37 had over 250.

Owing to the small range of this paper we can only shown the results of the study, however, it can be important for any further focus on this underestimated part of SME.

The results clearly show that the majority of small and medium enterprises have no separate marketing employees. It is almost unbelievable that this situation occurs even in companies with over 250 employees.

The usual practice is to include the marketing department inside the sales department. In such a case the whole of marketing is shrunk to promotion of the current products and there is not enough space for new concepts.

We cannot consider these companies as direct marketing, because the marketing personnel do not participate in the management of the company. The integration of the marketing department in companies does not reflect the current tendencies in the organisation and management of a company.

Further research showed that many employees of the marketing department have not the necessary qualification, i.e. an economics degree.

Further, there are many “old hands” employed and there is a growing need for faster requalification. The study showed that although companies do requalification

courses, nevertheless their frequency and regularity is not satisfactory (Kloudová, 2000; Nováček and Kloudová, 1999).

The outcomes of the survey can be summarised into the following points:

- The majority of companies do not put enough stress on the importance of marketing and see its position as part of the sales department. Marketing employees are not sufficiently qualified in the main and get their positions thanks mostly to restructuring.
- We can see positive development in the implementation of information technology, which is better than with larger enterprises.
- There is a high level of Internet use. Most companies have Internet connection or plan to get it soon.
- A rather alarming situation is the exploitation of state funds designed to support enterprise. Most companies have no idea of any such organisations and their supporting programmes.

At present another survey dealing with companies from the whole of the Czech Republic is being carried out. It started in 2001.

4. Conclusion

Greater complexity of the enterprising environment and its changes forces managers to obtain more complex information. Pressure on the part of the customer increases. It is necessary to realise how serious and costly wrong decisions may become.

Our article has tried to pinpoint some of the aspects of the SME area related to the forthcoming entry of the Czech Republic into the EU from the national and regional perspective.

References:

- Barrow, C. (1992), *Základy drobného podnikání*, Prentice Hall International (UK) Ltd. Grada Publishing, s. r. o. 1996.
- ČR (1998), *Strukturální fondy jako hlavní nástroj regionální politiky EU. Příprava České republiky na jejich využívání*, Ministerstvo pro místní rozvoj ČR, odbor evropské integrace, Prague.
- Czerná, I. (1999), 'Evropská unie byla připravena respektovat osm krajů. Rozhovor s Josefem Postráneckým', *Veřejná správa*, No. 1, pp. 22-23.
- (1999a), 'Dosáhneme na prostředky poskytované Evropskou unií? Rozhovor s Evou Píšovou', *Veřejná správa*, No. 1, pp. 24-25.
- EURO – info (1996), *Jednotná definice evropských malých a středních podniků*, EURO – info, No. 3.
- Glogar, A. (1999), *Jak děláme marketing*, Institut průmyslového inženýrství, Liberec.
- Had, M., Urban L. (1997), *Evropská společenství, první pilíř Evropské unie*, Ústav mezinárodních vztahů pro Nadaci pro studium mezinárodních vztahů, Prague.
- Kloudová, J. (2000), 'Metodika tvorby marketingového autoauditů pro malé a středně velké firmy', in: *Vědecké spisy VUT v Brně*, Edice PhD Thesis, sv. 47, VUT, Brno.
- Kotler, P. (1995), *Marketing management*, 2. vyd., Victoria Publishing, Prague.
- METOD KONULT IPM (2002), *Program rozvoje územního obvodu Zlínského kraje*. Krajský úřad Zlínského kraje, Zlín (unpublished paper).
- Murphy, M. (1996), 'Small Business management', *Financial Times Management*.
- Nováček, V., Kloudová, J. (1999), *Malé a střední firmy v procesu globalizace. Súčasný trendy v manažmente*, Zborník z medzinárodnej konferencie, Economic University in Bratislava, Bratislava.
- Prančl, K. (1999), 'Zpracování Strategie regionálního rozvoje ČR', *Veřejná správa*, No. 12, pp. 10-23.
- Regionální diář Střední Moravy* (1998), Regionální agentura pro rozvoj střední Moravy, Olomouc.
- VE (1997), *Všeobecná encyklopedie ve čtyřech svazcích*, Print centrum, Zlín.

Part 4

Technological Changes and Transition Countries' Prospects for Growth

The Institutional Infrastructure of the ‘New Economy’ and Catching-up Potential of Post-Socialist Countries⁺

Marcin Piątkowski

The contribution of the ‘new economy’ to economic growth in developing countries has been minimal when viewed from a macroeconomic perspective. Despite the recent ‘new economy’ hype, this paper argues that the ‘old economy’ will for a long time be the fundamental force behind economic growth in transition economies. Nonetheless, in the longer run the ‘new economy’ offers great potential for faster economic growth and increasing standards of living in less developed countries, post-socialist countries included.

Realising the potential of the ‘new economy’ is, however, not automatic. It can be left unharnessed if there is no suitable institutional infrastructure, which would allow for adoption, diffusion and productive use of innovative technologies.

This paper constructs a New Economy Indicator (NEI) measuring the level of readiness of transition economies for harnessing the potential of the innovation and technology diffusion stemming from the ‘new economy’ to accelerate the long-term economic growth and catching-up with developed countries. In the NEI ranking Slovenia scored the highest, followed by the Czech Republic, Hungary, Estonia, Slovakia, and Poland. Georgia, Azerbaijan, Uzbekistan, Albania, Bosnia and Herzegovina, and FR of Yugoslavia occupy the bottom of the table. The results seem to be congruent with a common knowledge that the most advanced transition countries should lead the ranking. Countries where the transition process has made the least progress rank at the very bottom.

The NEI results largely square with the ranking of the Global Competitiveness Report published by the World Economic Forum (2001), which illustrates countries’ competitiveness. This suggests that fundamentals responsible for the development of both the ‘new’ and the ‘old’ economy are largely the same. Hence, since both ‘economies’ rely on the same foundations, then there is no ‘new’ or ‘old’ economy: there is only one economy where old recipes for development still apply.

1. Introduction

The ‘new economy’ hype is over. The bursting of the stockmarket bubble instilled much needed realism into debates on the economic impact of the on-going technological revolution spurred by information and communication technologies (ICT), and most visibly embodied in the Internet. The business cycle is alive and kicking, unemployment is up, and shares prices are down. The economic nirvana of the ‘new economy’ did not materialise. The ‘new economy’ thus still needs to be written in quotes.

⁺ This paper was presented for the first time at the international conference on the “‘New Economy’ and Old Problems. Prospects for Fast Growth in Transition Economies”, 14-15 March 2002, Warsaw, Poland.

The impact of the 'new economy' on the world-wide economy, despite the recent hype, has so far been quite limited, particularly in terms of its geographical reach. The 'new economy' has been mostly felt in developed countries, some examples to the contrary notwithstanding (Bangalore in India is a fitting and often-cited example). However, the contribution of new technologies to growth in developing and transition economies has been minimal, particularly when viewed from a macroeconomic perspective.

Despite a somewhat ambivalent start, in the longer run the 'new economy' offers great potential for faster economic growth and an increase in standards of living in less developed countries, transition countries included¹. The acceleration in productivity and output growth could allow transition economies to shorten the process of their catching-up with developed countries. The relative low level of economic development together with technological backwardness gives them a handicap in development: thanks to absorption, imitation and application of knowledge, blueprints, ideas, technological and organisational advances, and superior technologies already developed in rich countries, post-socialist economies should now grow faster than developed economies. Post-socialist countries may be thus able to 'leapfrog' stages of technological development and subsequently considerably increase rates of economic growth. The 'knowledge-like', weightless nature of the 'new economy', which provides for easier and faster diffusion, can further accelerate the absorption process.

Realising the benefits of the 'new economy' is however not automatic. Its potential can be left unharnessed if there is no suitable institutional infrastructure, which would allow for adoption, diffusion, and profitable use of innovative technologies.

After more than a decade of transformation from a command economy to a market economy, the process of institution building is still far from being concluded. Like the technological revolution, the post-socialist institutional revolution is not over. The results of the latter revolution will bear upon the future prospects for development. Countries with insufficiently developed institutions are likely to find themselves in a "technological trap", risking to be marginalised in a global economic community. Various speeds of adoption of the 'new economy' are also likely to add to the growing polarisation of growth rates in the post-socialist countries. Ultimately, the 'new economy' can have both its winners and losers. The existence of appropriate institutions will be one of the deciding factors.

Hence, what are the institutional preconditions for transition economies to benefit from the potential of the 'new economy'? What is the current level of institutional readiness for adoption of the 'new economy' among transition countries? Can it prosper in spite of the old problems of the poor "hard" infrastructure, lack of regulations and mature institutions, scarce capital, and finally lack of English language skills? What are the future prospects?

¹ The following terms: transition countries/economies, post-socialist countries/economies, and Central and East European and Central Asia countries (CEECA) will be used interchangeably. The category of transition countries in this paper includes 27 post-socialist countries of Albania, Armenia, Azerbaijan, Belarus, Bosnia and Herzegovina, Bulgaria, Croatia, Czech Republic, Estonia, FR Yugoslavia, FYR Macedonia, Georgia, Hungary, Kazakhstan, Kyrgyzstan, Latvia, Lithuania, Moldova, Poland, Romania, Russia, Slovak Republic, Slovenia, Tajikistan, Turkmenistan, Ukraine and Uzbekistan.

This paper constructs a *New Economy Indicator* (NEI) measuring the level of institutional readiness of transition economies for harnessing the potential of the innovation and technology diffusion stemming from the 'new economy' to accelerate the long-term economic growth and catching-up with developed countries. The NEI indicator is comprised of ten variables believed to be the most pertinent for development of the 'new economy' and its profitable use. These are the following:

- quality of regulations and contract enforcement,
- infrastructure,
- trade openness,
- development of financial markets,
- R&D spending,
- quality of human capital,
- labour market flexibility,
- product market flexibility,
- entrepreneurship,
- macroeconomic stability.

The structure of the paper is as follows: section 2 will succinctly discuss the phenomenon of the 'new economy' and its recorded impact on output and productivity growth. Section 3 will analyse current and prospective effects of the ICT revolution on growth in transition countries. In section 4 the NEI indicator of the quality of institutional infrastructure will be developed. Section 5 will conclude the paper.

2. Is there a 'new economy'?

The existence of the 'new economy', the term itself so often put in quotes, is still open to debate. Still only a little more than a year ago the concept of the 'new economy' was meant to describe an emergence of an apparent non-inflationary growth paradigm spurred by the technological revolution of the 1990s, most visibly embodied in the worldwide Internet. Nowadays, the 'new economy' is most often construed as a superior economic structure perpetuated by innovations in information and communications technologies (ICT), which – while impacting all sectors of the economy – accelerates productivity and economic growth. Other definitions underscore the contribution of globalisation to the 'new economy' (Pohjola, 2001b), spillover effects of communications networks (Stiroh, 1999), and finally permanently higher growth rate in productivity stemming from the production, adoption, and continued diffusion of ICT (De Masi *et al.*, 2001). The ICT is in turn defined as "those industries, which facilitate, by electronic means, the processing and display of information" (Bassanini *et al.*, 2000).

Kołodko (2001) explains why the 'new economy' should be always put in quotes. He asserts that "there is no 'new economy': there are only new technologies of production and distribution, which have a qualitative influence on ways of doing business". Gordon (2000) indirectly subscribes to this assertion by arguing that faster economic growth in the US in the late 1990s was not due to the 'new economy' but to

productivity improvements in the ICT sector alone complemented by the cyclical effects of higher investments.

So, is there a 'new economy'? "Yes" or "No"? It depends on the definition and assessment criteria. These differ. On one hand, there is no 'new economy' if one agrees that the posited new paradigm of economic growth has so far not materialised. Furthermore, contrary to what was argued by the 'new economy' proponents, traditional economics seems to have not lost its power of explaining recent growth performance. On the other hand, however, there may be a 'new economy' if one agrees with its narrow definition: the 'new economy' is a complex of new economic phenomena and interdependent processes based on ICT products and services, which permeate the whole economy and induce new ways of doing business. Yet, this narrow definition situates the 'new economy' firmly within the traditional 'old economy': the 'new economy' is just another emanation of a never-ending process of technological and economic progress.

Faster economic growth progress due to ICT is confirmed by micro- and macroeconomic data on the recent performance of the US, Finland, Ireland, Sweden, Singapore, and Australia. All these countries increased their rates of output and productivity growth in the late 1990s. The extraordinary acceleration in productivity and output growth in the US economy in the 1990s, particularly in its second half (on which, by the way, the whole debate on the 'new economy' was mostly centered), coupled with low inflation and unemployment, suggested that indeed the 'new economy' existed. Between 1995-2000 American annual productivity as measured by GDP per hour worked in the non-farm sector increased to 2.5% (Economist, 2001b) from 1.4% in the 1972-1995 period (Pohjola, 2001b). A major part of it was driven by the ICT; the OECD (2001a) calculated that in the second half of the 1990s the ICT capital boosted annual average GDP growth in the business sector of the US by 0.9% (the winners-up, Australia and Finland, recorded 0.6% annual growth).

It now seems that the American "new economy miracle" was driven by factors well-known to traditional economics – a significant increase in investment rates (capital deepening) driven by declining prices of ICT equipment, which enhanced growth in ICT-using sectors, much faster productivity and output growth in ICT industry itself, and much higher labour utilisation (Oliner and Sichel, 2000; OECD, 2000, 2001a). While the impact of the spillover (networks) effects on the economy is less certain, these effects do indeed seem to have contributed to faster economic growth, as well.

Notwithstanding the American 'miracle', the impact of the 'new economy' on the global economy has so far been negligible. Apart from the US, the 'new economy' was felt only in a handful of other countries: Finland, Sweden, Australia, Ireland, Singapore, and South Korea. The rest of the world hardly seems to have benefited from the technological phenomenon. Japan, Germany, France and Italy did not record any acceleration in economic growth. The contribution of ICT to annual average GDP growth in the business sector amounted to only 0.3% (OECD, 2001a) as compared to 0.9% in the US.

The 'new economy' in developing countries, aside from small-scale microeconomic improvements, did not seem to add much to economic growth, either.

Software industry development in Bangalore in India, fish markets in Bangladesh, east European information portals, or Internet coffee markets in Brazil have added much to the 'new economy' hype. Alas, these much-cited developments did not seem to have added equally to the economic growth of their countries.

The impact of the 'new economy' was thus geographically limited. In addition, its contribution has so far been also only transitory – last year despite the 'new economy', the whole world (including the US – the paragon of the 'new economy') entered a period of much slower growth, often verging on recession. The business cycle, contrary to the predictions of the 'new economy' partisans, is alive and kicking. The economic boom was not sustainable. Technological revolution by itself was not able to drive the economy. The last phase of the cycle, driven by acceleration in investments and a boom in consumption propelled by the stockmarket bubble, has ended. The party is now over.

3. The impact of the 'new economy' on transition countries

Heretofore, macroeconomic impact of technological innovations underlying the 'new economy', on transition countries was negligible. Results of a comprehensive cross-country empirical study on the returns of IT investment in developed and developing countries (Kraemer and Dedrick, 2000), based on data from 36 countries for the period of 1985-93, show that returns on IT investment are "positive and significant for developed countries, but not statistically significant for developing countries". The estimate of IT output elasticity is 0.057 (positive and significant) for developed countries², but statistically indistinguishable from 0 for developing countries". Pohjola (2001a) shows that the relative contribution of IT to GDP growth in developing countries was less than 2% (China, India, Argentina, Chile, Brazil, Thailand, Venezuela) compared to more than 10% in the US, Finland, Canada, Sweden, and the UK. No other studies, at least that the author is aware of, have found any sizable contribution of ICT to growth in developing countries. Surely, more research is needed on the impact of ICT on post-socialist economies (where lack of relevant data is a usual constraint).

One reason for the apparent lack of benefits from the diffusion and adoption of the 'new economy' in transition countries is still the relatively small value of IT investments, which does not find reflection in national accounts – the most advanced transition countries (Poland, the Czech Republic, Hungary, Slovakia) in 1999 invested in IT between 1.9% (Poland) to 4.2% (the Czech Republic) of their GDPs compared to Sweden's 6.5%, 5.3% in the US and the overall OECD average of 4.3% (OECD, 2001b). Even in absolute numbers the value of IT investments in Central and East European countries was much smaller than in rich countries.³ IT investments in less developed transition countries (Central Asia, for instance) are not likely to exceed 1% of GDP. Thus, it seems, investments are too small to bear upon growth.

² A 10% increase in IT investment should result in 0.57% increase in output.

³ According to IDC (2000), all transition economies spent a bit more than US\$ 10 billion on IT in 1999. This is roughly equal to the IT investments of Sweden alone.

Yet, why don't even small investments yield positive returns? Kraemer and Dedrick suggest that developing countries, as opposed to developed countries, have not been able to use profitably ICT products and services due to the lack of complimentary investments in infrastructure, human capital, R&D and so on. This seems to be right. Returns on many various high-value added investments depend on complementarities. To put it into colloquial terms, a brand new high-tech factory in the middle of an underdeveloped (or "developing" as euphemistically we all have learned to say), country will not be efficient owing to the lack of local suitable labour skills, infrastructure, regulations, taxation and so on (which together equates to institutional infrastructure, as we discuss more forcefully later). In this environment, returns on investments in basic infrastructure (drinking water, primary schools, irrigation) are very likely to be more productive than high-technology investments. As a result, some transition countries could rightly decide to invest in basic infrastructure while compromising ICT investments.⁴ Consequently, at least during the process of building basic infrastructure, a technological chasm between underdeveloped and developed countries could further widen.

The technological gap could also widen between more or less developed transition economies. The 'new economy' may thus contribute to rising growth disparities in transition economies. Different qualities of institutional infrastructure and the resulting various speeds at which transition economies espouse the Internet revolution will most likely lead to further polarisation of patterns of economic growth in those countries. The least developed countries, like Tajikistan or Albania, can even find themselves in the technological trap. Initial development conditions therefore matter for the adoption of the 'new economy'. This is because when one country is better developed than another, then it has higher chances for taking advantage of the 'new economy'.

Despite negligible macroeconomic impact, the IT revolution seems to have contributed to productivity and output growth on a microeconomic level in certain industries (retail, financial services, transport) and specific enterprises. Anecdotal evidence abounds – management information systems together with the use of e-mail seem to have been the most appreciated for their contribution to better productivity (as recently discussed with several CEOs in Poland). Yet, these effects are seemingly too small to reflect on the macro picture.

The 'new economy' has contributed to a few success stories. Rapid development of e-banking⁵, e-commerce⁶, and Internet portals bears proof of the potential of new

⁴ The technological trap is analogous to the poverty trap, which is very interestingly discussed in Easterly (2001). He explains the idea of a poverty trap by taking an example of the returns on education in an underdeveloped country, where it is more profitable for parents not to spend money on education of their children since benefits from being educated in a poor country are likely to be lower than a value of children's lifelong work on the farm.

⁵ The Polish Internet bank, mBank, has attracted more than 150,000 accounts in less than a year since its inception (*Gazeta Finansowa*, 2001); the runner-up, Inteligo, boasts of more than 100,000 accounts as of the end of 2001. Coupled with other banks, it is estimated that as of the end of 2001 there were roughly 440,000 clients using internet accounts, six times more than in December 2000 (*Rzeczpospolita*, 2002a). Analysts project that by 2005 Poles will maintain some 2 million e-accounts (*Prawo i Gospodarka*, 2001). Note: the number of clients is not equal to the number of internet accounts – clients can maintain more than one account.

technologies. Yet again, far from being euphoric, the macro impact of e-business in transition countries is still insignificant. Growing penetration of the Internet, (more than 10% of Poles used the Internet regularly as of the end of 2001; more in Estonia, Slovenia, Hungary, the Czech Republic, but much fewer in other post-socialist countries), promulgation of e-signatures (the Czech Republic, Slovenia, Poland, Hungary), or attempts at introducing e-government (like in Slovenia: *Economist*, 2001a) by itself does not much contribute to economic growth, either⁷.

Microeconomic rapid progress in adoption of ICT innovations bears proof of the potential of the technological revolution for transition countries. As for now, though, it seems that much more time is needed for microeconomic progress to make a tangible impact on people's well-being. Productivity improvements at the firm and industry level driven by information technology are, however, likely in the medium and long-term to contribute to acceleration in aggregate growth. Additionally, in the long run, as argued by the conditional convergence hypothesis, transition countries should also grow faster than developed countries owing to absorption of knowledge other than technology, organisational and managerial blueprints, and financial resources from rich countries. Benefits of convergence and IT will depend on the quality of national policies and the level of development of institutional infrastructure.

The 'new economy' and the times of 'punctured equilibrium' (Thurow, 2001) that it induces, offer quite a few opportunities for transition economies to achieve faster development. At the same time, however, it poses substantial threats. However, the scope of this paper does not allow for discussing these points in detail. Transition countries stand a chance to grow faster thanks to the low opportunity costs of switching from old to new technologies, (these are higher for developed countries – no 'sunk costs' for transition economies), younger populations which generally tend to espouse innovations faster, and a relatively high level of educational attainment, the value of which is much higher in the 'new economy' environment. Additionally, the potential of the Internet revolution also stems from the weightless, knowledge-like nature of the 'new economy' (Quah, 2001), which allows for its faster diffusion and adaptability of innovations, and thus higher value of international R&D spillovers. These opportunities are mitigated by threats of digital divide and technological trap.

Despite challenges, the economic potential of the technological innovations underlying the 'new economy' is significant. That is because in the long-run technical progress is everything – in his famous article Solow (1957) found that capital accumulation accounted for only 13% of economic growth in the US in the first part of the twentieth century. The rest, almost 90%, was attributed to technological progress (as expressed by TFP – total factor productivity).

⁶ E-commerce is rapidly developing. International Data Corporation estimates that in 2001 the e-commerce market in four Central European countries (Czech Republic, Hungary, Poland, Slovakia) will increase 6-fold to \$650 million (*Rzeczpospolita*, 20 July 2001). In Poland www.ce-market.com, a successful B2B platform for transactions in non-ferrous metals, attracted more than 450 customers in less than six months from inception. In the same period, the total value of transactions amounted to some \$6 million – see: http://www.ce-market.com/aboutus_what_press.asp.

⁷ Although growing Internet penetration surely contributes to better access to information, convenience, customer choice and satisfaction. These factors may be captured only by some kind of a Human Convenience Index, the value of which surely catapulted after the emergence of the Internet.

In the shorter run, though, it appears that traditional accumulation of physical and human capital matters more than technological progress. This is also because of the pace of technological progress itself, still mostly embodied in equipment and machinery, largely depends on investment in physical capital. Investment in physical capital expands and renews the existing capital stock and enables new technologies to enter the production process. Welfe *et al.* (2001) found that based on growth accounting calculations, between 1974-1990 Poland's annual TFP growth amounted to 0.73%, which represented only 26% of the period's potential annual growth rates. Physical and human capital accumulation was responsible for the remaining 74% of the potential GDP growth. Calculations based on data for the 1990s revealed that investments in physical capital were responsible for almost half of the growth in potential GDP (1990-95) and between 80-90% of growth between 1996-2000. The effects of technical progress, driven by the increase in the quality of human capital and the absorption of foreign technical progress, were thus quite limited.

Coe and Helpman (1995) show that between 1991-95 technological progress (TFP) in most developed countries of Western Europe was responsible for approximately 60% of the annual GDP growth rates⁸, that is substantially more than in Poland. This suggests that for Poland, and – per proxy – other transition economies, accumulation of traditional factors of production, that is investments in physical, and – to a lesser extent – human capital, matters much more than for developed countries. Hence, traditional factors will long remain the mainstay of economic growth in transition countries.

This may stem from the fact, as also argued by Kreamer and Dedrick (2001), in order for developing countries to reap the benefits of technological progress, they need to first develop physical infrastructure, invest in labour skills, and promote new institutions, which all amplify the effects of technological progress.

One can conclude that the process of catching-up of transition economies will mostly depend on the 'old' economy. Nonetheless, the importance of the 'new economy' for economic growth is likely to increase gradually – diminishing returns to investment in physical and human capital imply that with time and rising incomes the growth of TFP driven by technological progress will have to accelerate in order to sustain high growth rates.⁹ In the long run, then, the ultimate success of catching-up will also depend on the 'new economy'.

Similarly, Kołodko argues (Kołodko, 2001, p. 71) that "the post-socialist countries – unlike developed market economies – need not aptly utilise the potential of e-business, but first raise efficiency of the 'old economy', since these two 'economies' are destined for a lengthy coexistence". One may add that the 'old economy' and capital and human accumulation, as prescribed by traditional development economies, also seem to be binding for developed economies. One of the paradoxes of the American productivity miracle in 1990s driven by the 'new economy' is the fact that

⁸ Potential TFP for Poland; actual TFP for Western European countries. See: Welfe *et al.* (2001) for methodological details.

⁹ Welfe *et al.* (2001) argue, based on their econometric model for Poland's economy, that in order for it to reach 6-7% annual growth of potential GDP during the next decade, and assuming that investments to GDP would equal 30% annually and the labour force would hardly change, the TFP will have to be responsible for at least 50% of the increase in potential GDP. Without acceleration in TFP growth, the potential GDP will only increase by 3 to 3.5% annually.

the European Union, seemingly quite slow in adoption of the Internet revolution, has nonetheless recorded productivity growth in 1995-2000 of 1.5% annually, only slightly below the 1.8% recorded in the US.¹⁰ The EU experience suggests then, examples of Finland, Sweden, and Ireland notwithstanding, that improvements in the 'old' economy must have mostly contributed to this significant productivity growth. Therefore, even in developed countries the 'new economy' is not the only solution to faster economic growth – the 'old' economy still has a great role to play. Old-style efficiency improvements in structural, organisational and institutional frameworks of economies still matter.

4. The New Economy Indicator (NEI)

Neither the 'old' nor the 'new economy' will develop without appropriate institutions. These, while creating particular economic incentives, decide on the allocative efficiency of an economy. The quality of institutions largely explains differences across countries in productivity and economic growth (North, 1990; Hall and Jones, 1996; World Bank, 2002; Clague, 1997). Likewise, technological progress also contributes to divergence in growth rates.

The paper develops an institutional indicator – the New Economy Indicator (NEI) – with an objective to provide a best estimate of prospects, based on the level of development of the 'new economy' institutional infrastructure, for harnessing the 'new economy' by 27 transition countries for faster long-term economic growth and catching-up.

As a word of caution, the NEI surely does not fully subscribe to the neo-classical model of economics, which heavily relies on hard data and mathematical models. The indicator, since it could not be falsified due to lack of reliable data, does not have any pretence to be a hard scientific proof. Nonetheless, the implications of the indicator seem indeed to add to the current stock on knowledge on the importance of institutions for adoption of new technologies. The lack of hard data should then not limit our quest for knowledge¹¹.

Motivation for the use of indicators, as argued by Zinnes, Eilat and Sachs (2001, p. 321) is two-fold: "first, (...) indicators provide an easy way to capture a concept when a

¹⁰ Calculated as Net Domestic Product (NDP) per man-hour (*Economist*, 2001b). If one takes into account GDP per hour worked in the ten years to 2000, American productivity in that period rose by an annual average of 1.6% in the ten years to 2000, but euro area productivity rose by 1.9%. Total factor productivity, which takes into account the efficiency with which capital and labour are used, also grew slightly faster in the euro zone than in America (*Economist*, 2001c).

¹¹ In a telling story, Krugman (1997) cites a paper on "the evolution of ignorance" about Africa. The paper describes the evolution of European maps of the African continent between the fifteenth and the nineteenth century. In the fifteenth century, maps of Africa were relatively inaccurate. Yet, they described the interior of Africa often based on indications like "six days to the south, two days east from there". In later centuries, cartography and the quality of information improved. The development of cartography, however, enhanced the standard of what would be considered valid data. Thus, "six days to the south" did not qualify anymore. As a result, maps developed in later centuries showed a sparser area for the African interior than on maps from the fifteenth century! As Krugman says "there was an extended period of time in which improved technique actually led to some loss in knowledge." He further concludes that "doing economics ... is a kind of mapmaking." This paper's indicator is yet another kind of a map.

single, quantitatively measured variable cannot. (...) Second, the indicator approach helps to overcome problems of scarcity and quality of data, which are major obstacles to any work on transition economies”. In other words, indicators come in handy when relevant hard data is missing.

Table 1. Variables

Factor	Proxy	Source
a) Quality of regulations and contract enforcement	Legal system effectiveness & extensiveness	EBRD
b) Infrastructure	Number of fixed telephone lines plus mobile phones per 100 persons	EBRD
c) Trade openness	Exports plus imports to GDP	EBRD
d) Development of financial markets	Broad money (M3) to GDP	EBRD
e) R&D spending	Annual R&D spending to GDP	Eurostat
f) Quality of human capital	Education Index 1999	HDI (UNDP)
g) Labour market flexibility	Unemployment rate	EBRD
h) Product market flexibility	Competition policy index	EBRD
i) Entrepreneurship	Private sector share in GDP	EBRD
j) Macroeconomic stability	Inflation	EBRD

Douglas North, the father of institutional economics, defines institutions as formal and informal “rules of the game”. Institutions are deeply rooted in the social, political, ethical, and cultural processes of a particular country and place constraints on social interaction (North, 1994, 1997). This paper’s indicator, while building on the foundations of this definition, as well as theoretical and empirical macroeconomics, combines ten variables, which are believed to be the most relevant for the adoption and profitable use of technological progress¹² The ten variables are as in the table above.

5. Description of the variables

First of all, a relevance of each variable for general economic growth will be established based on a selection of research results. Secondly, the relevance of each of the variables for harnessing the potential of the ‘new economy’ will be discussed. Thirdly, some comments will be made on the level of development of transition countries as regards to particular variables.

The measure of the level of development of the ‘new economy’ institutional infrastructure will be reflected by a weighted sum of values of all ten variables for each country. It has been assumed that the variables of quality of regulations and law enforcement, financial development, trade openness, infrastructure, R&D spending, and human capital will be given twice as large relative weight compared to other variables (which have been multiplied by 0.5) as they are believed to be the most

¹² These are also based on various research projects (OECD, 2001a; IMF, 2001; World Bank, 1998/99).

important for the 'new economy'. Due to either lack or limited availability of relevant data, variables are proxied only by observations available for the whole sample of countries. While it would be much more appropriate, for instance, to use a number of Internet hosts or a number of PCs per capita to measure the infrastructure variable, only data for fixed line telephone penetration is available for the full sample of transition economies. Simply, the best available sets of data were used to measure each variable.

The construction of the indicators is based on the competitiveness indicator developed by Zinnes, Eilat and Sachs (2001, p. 322) and is performed in the following way:

- variables are selected, ensuring that each of them is either entirely positively or negatively related to the main concept;
- if variables are negatively correlated (like inflation), they are multiplied by -1 to insure that always "more is better";
- variables are standardised.¹³

a) Regulations and contract enforcement

As argued by Clague *et al.* (1997) the quality of regulations and contract enforcement mechanisms largely explain why some countries prosper while others do not. He shows that the high level of contract enforcement and respect for property rights lowers the cost of market exchanges. The lower costs of transactions due to better contract enforcement are especially important for transition countries, where costs of transactions, because of the low level of development of market exchange mechanisms, are much higher. Higher transaction costs stifle economic growth. Quite evidently then, the quality of regulations and contract enforcement is vital for long-term economic growth.

Rule of law is equally important for the adoption of new technologies, particularly in less developed post-socialist countries, where contract enforcement traditionally has been lacking. New enterprises utilising innovations will not prosper if the legal environment is not conducive to their development. When faced with inadequate law enforcement, entrepreneurial effort tends to shift to less transparent grey and black markets. The law extensiveness and quality of contract enforcement is then prerequisite to emergence of the 'new economy'.¹⁴

¹³ The sample mean is subtracted from each number and then the result is divided by sample standard deviation. This implies a mean of zero and a standard deviation of one across countries in the sample. Hence, all results are comparable and can be aggregated.

¹⁴ However, quite interestingly, software piracy, due to lack of contract/copyright enforcement, is beneficial to the adoption of the 'new economy' in transition economies. Billions of dollars' worth of software has been pirated and then widely distributed at a low cost. As reported by Business Software Alliance (2001), in 1999 alone \$12 billion worth of software was pirated globally. A couple of years ago, the majority of software used by local enterprises even in Poland were not licensed. In less developed countries, like Kazakhstan or Albania, almost all software is still illegal. Piracy pays: in the short run it definitely adds to faster diffusion of information technologies. Without piracy, technological catching-up would be considerably slower as local economies could not afford to pay the full price of software products. This Machiavellian idea does not, however, hold in the long run. In the longer perspective, the low quality of contract enforcement and regulations is inimical to growth. This is true also because

b) *Infrastructure*

This is quite a self-evident category for the adoption of the ‘new economy’ – there will not be any ‘new economy’ without telephone and computer networks¹⁵. It seems probable that in order to benefit from the so-called network effects one needs to exceed a critical point in development of the network. While the exact position of the critical point is not known, it seems reasonable to assume that it is close to universal penetration. Network effects may then be non-linear – after exceeding the critical point, the economic value of the network increases more than proportionately.

It is common knowledge that communications and computer/Internet infrastructure in transition economies significantly lags behind developed countries. According to Eurostat (2001) statistics on the EU-candidate countries for 2000, the number of PCs and Internet hosts in a covered sample of transition economies are relatively low compared to EU countries. Diversity in results is interesting – PC penetration in Slovenia almost equals the EU average of 28.6 PCs per 100 inhabitants; in Bulgaria though, the PC penetration amounts to only 4.4 per 100 inhabitants. Similarly with Internet hosts: Slovenia boasts of 1.4 hosts per 100 inhabitants compared to Bulgaria 0.2 and the EU average of 3.3. Indeed, there is much to be done to improve the ‘new economy’ infrastructure.

Persisting underdevelopment of infrastructure does not, however, change the fact that in recent years most transition economies have made big steps in up-grading their networks. Mobile telecommunications, one of the wonders of the ‘new economy’, allowed most countries to start rapid catch-up with developed countries. It is a perfect example for potential of technological “leap-frogging” – from years-long waiting lists for fixed line telephones to plentiful access to mobile telephones at affordable prices.

c) *Trade openness*

There is a broad consensus among economists that liberalised exports and imports are positively correlated with productivity and output growth. Trade openness is particularly important for diffusion of knowledge and innovations – imports are their main carrier. Open borders allow for international R&D spillover effects, which may represent a very potent contribution to economic growth in developing countries (According to Mohnen 2001, a 0.5% increase in R&D spending in terms of GDP in developed countries may result in a 14% increase in output in the long run in developing countries). Coe and Helpman (1995) find a significant relationship between import propensities and the ability to benefit from R&D spillovers: *i.e.* for a given level of R&D performed abroad, countries with a higher import propensity have higher productivity growth.

d) *Financial markets*

Schumpeter (1912) already asserted that a developed financial sector is important to economic growth. This assertion was confirmed by the evidence of King and Levine

countries known for piracy, risk being isolated by the international trade community and thus lose access to knowledge spillovers.

¹⁵ Other types of hard infrastructure are almost as important – the ‘new economy’ will not develop in a country with dilapidated transportation networks (“proverbial pot holes”), and low quality logistics system.

(1993), Levine (1997), and Greenwood and Smith (1997), to name a few. Financial markets play an important role in collecting and aggregating savings and then redistributing it for productive purposes.

A developed financial market is evidently critical for the 'new economy'. In particular, the value of venture capital (VC) investments is especially important as it finances start-up companies, which tend to predominantly utilise new technologies and ideas (as the experience of 'dot.coms' suggests). Equity markets represent the second important channel for financing the 'new economy'.

Unfortunately, neither of the two 'new economy' financial channels is sufficiently developed in transition economies. The total value of VC investments is negligible. According to available data (Global Entrepreneurship Monitor 2001) in 2000, domestic VC capital investment to GDP in Poland, one of the most developed countries in Central and Eastern Europe, amounted to less than 0.1% compared to 1.2% in Israel and 1.0% in the US. According to Dresdner Kleinwort Capital (2001), in the whole of Central and Eastern Europe, the average ratio of private equity funds raised (raised does not mean invested, though) to GDP as of the end of 2000, amounted to 1.3% compared to the UK with more than 5.1%, Sweden with 3.3% or France at 2.0% of GDP. In Poland alone the aggregate amount of VC capital invested was about EUR 200 million in 2000 – that is only 0.1% of GDP!

The allocative role of equity markets is equally small – the total value of equity sold through IPOs on the Warsaw Stock Exchange in 2000 amounted to some 0.6% of total annual investments in fixed capital. Hence, the financial infrastructure of the 'new economy' in transition countries is underdeveloped and undoubtedly limits prospects for realising the economic potential of the ICT.

e) R&D spending

Thanks to the findings of the endogenous growth theory and many other research papers, the importance of R&D for economic growth is by now quite obvious. Stiglitz (1998) states, "studies in returns to R&D in industrial countries have found individual returns of 20-30 percent and social returns of 50 percent and higher". He further argues that "for most countries not at the technological frontier, the returns associated with facilitating the transfer of technology are much higher than the returns from undertaking original R&D". Hence, it seems that an ability to absorb the technology is key to fast development.

In transition countries R&D spending is at a very low level. It generally does not exceed 1.0 % of GDP compared to more than 2.0% on the average spent by the OECD countries. Low R&D spending puts post-socialist countries in a disadvantaged position since local R&D is extremely important for understanding and absorbing knowledge developed internationally, for up-grading their own R&D skills, and for active participation in international R&D networks. The OECD (2001a) argues that "domestic R&D (...) is key in tapping into foreign knowledge; countries that invest in their own R&D appear to benefit most from foreign R&D." Domestic R&D is then essential for absorption of international R&D spillovers.¹⁶

¹⁶ It has been argued that the rapid development of Japan since the 1950s and later Korea has been mostly based on successful adoption, imitation, and sometimes up-grading of innovations developed abroad. The

R&D spending is nevertheless not everything – what matters is a profitable application of the newly created knowledge. This is where the post-socialist countries seem to lag the most: the flow of knowledge between science and industry is very weak. Most R&D institutes in post-socialist countries, often quite sophisticated in the quality of their research, nonetheless are very incompetent in terms of diffusing the results of their research for business use. This is mostly due to the legacy of socialist times when all applications of R&D were controlled by the state. The state relinquished this role in the early 1990s and left it entirely to R&D institutes. But they proved unable to disseminate this knowledge because of the lack of clear incentives (like financial bonuses) and often, insufficient financial support.

The ability of enterprises in transition economies to adopt R&D created both locally and internationally, is equally low. It is because the level of business R&D is particularly small. According to the OECD (2001b) Main Science and Technology Indicators, business enterprise sector R&D expenditure as a percentage of the domestic product of industry in 1999 amounted to 0.42% in Poland, 0.33% in Hungary, 0.69% in Slovakia, and 0.95% in the Czech Republic. This compares to Sweden's 4.74% and the OECD average of 1.89%.

Foreign direct investment (FDI) can play a substantial role in domestic absorption of international R&D. Its role should be growing. Yet, FDI inflows depend on the attractiveness of particular countries. Here transition countries lose in the global battle for FDI: they attract less than \$30 billion annually, which is less than Brazil alone. Transition countries then have a lot to do to promote FDI and its R&D component.

f) Human capital

The role of human capital in economic growth is widely acknowledged. Various empirical studies have found that human capital is positively correlated with GDP growth rates (Benhabib and Spiegel, 1994; Barro and Sala-i-Martin, 1995; Bassanini and Scarpetta, 2001b).

Benefitting from the ICT requires the right skills and competencies. That involves building on the foundations of solid education and lifelong learning. Tertiary education is particularly important for the 'new economy' since mostly this level of education prepares people for absorption of high-technology knowledge from abroad. In this context, it is also important to note that in order to benefit from ICT, tertiary education in maths, computer science and engineering rather than liberal arts should be emphasised.¹⁷

The quality of human capital in transition economies is relatively high despite their low national incomes. Ukrainian human capital is better developed than Venezuelan and Tajikistani better than Nigerian.¹⁸ Human capital is one of the few positive legacies

same path can be taken by transition economies. Yet, domestic R&D is needed in order to follow this route successfully.

¹⁷ For instance, according to Stiglitz (1998) the high ratio of engineers in tertiary education in Korea and Taiwan (almost triple the US level) contributed to narrowing their productivity gap with developed countries.

¹⁸ According to the Human Development Index 2001, the Education Index 1999 for Ukraine amounted to 0.92, while its GDP index was only 0.59. This compares to, for instance, Venezuelan GDP index of 0.67, and Education Index of only 0.83. Post-socialist countries on the whole, thanks to a high value of the

of the communist or socialist era. Yet, formal education is not all – especially because ICT appropriate skills matter more than broad knowledge. ICT skills are lacking in transition countries. This is due to the relatively low numbers of maths, physics, and engineering oriented graduates. More importantly though, it seems to be due to lack of the culture of lifelong learning – it is very rare to see middle-aged people take courses in local universities. Yet, without lifelong learning people will not be able to keep abreast of ever-changing technology, whose progress – owing to the 'new economy' – has recently even quickened.

Education also contributes to the driving demand for technological products. As argued by Quah (2001), the 'new economy' will not develop without demand for its products. Here again a lot can be done in post-socialist countries in terms of changing their attitudes towards adoption of innovations. Better education surely will help. Nonetheless, current attitudes will not be changed overnight – cultural and societal changes take decades to come about. This risk is however largely mitigated by an apparent strength – since youth tend to adopt innovations faster, then the relatively young populations of Eastern Europe and Central Asia should espouse technology faster than older and established societies in developed countries.

g) Labour market

The relevance of labour market flexibility for economic growth has been known for a long time. The OECD Jobs Study launched in 1994 was the first to find evidence that flexible labour markets result in reduction in unemployment (OECD, 1999). Higher employment translates into higher output. Di Tella and MacCulloch (Economist, 1999) found additional powerful evidence based on a survey of 21 countries over seven years to 1990.

Flexible labour markets are particularly important for the development of the 'new economy': adoption of e-business and emergence of new organisational and management structures predominantly require flexibility in re-allocating people from old to new tasks and new ways of doing business. Since innovation introduces new products and industries that replace existing ones, it leads to labour re-allocation between firms and sectors. Rigid labour markets, while stifling necessary changes in employment, inhibit the adoption of the 'new economy'. Flexible labour markets are thus necessary for adoption and diffusion of the technological revolution (Johnston, 2001).

h) Flexible product markets and competition

Competition, through lowering of the barriers of entry, improves incentives and thus leads to more productive use of resources. The importance of flexible product markets for economic growth has so far been plainly evidenced (Bassanini, 2001a).

Competitive markets are very important for the growth of the 'new economy' and its contribution to increasing productivity. New, more productive enterprises using new technologies have to have a chance to compete with incumbent companies. Market regulatory framework has to push down the barriers of entry as low as possible.

Telecoms companies are a case in point – in countries where the telecommunication market has been liberalised (the US, most of the EU, developed countries of the South-East Asia), the quality and cost of telecommunication services has considerably dropped in a short period of time. This is mostly not the case with telecom companies in transition economies, which retain their monopolistic positions. Market liberalisation is thus extremely important for the emergence of the ‘new economy’.

i) *Entrepreneurship*¹⁹

It is not enough to know. It is equally important to be able to put the knowledge into profitable use. That is where entrepreneurial spirit and thus entrepreneurs come into place. There would be no commercially utilised innovations without entrepreneurs. They transform somebody else’s ideas into economic reality.

Schumpeter had a long time ago discovered the links between entrepreneurship and economic growth. He was the first one to assert that entrepreneurship is, next to innovations and credit, an important factor spurring economic growth (Blaug 1994). As forces of “creative destruction” replace old inefficient firms with new and innovative firms, the growth rate of productivity accelerates.

To state the obvious, entrepreneurship is at the core of the ‘new economy’. There would not be Amazon, Yahoo, eBay, and other paragons of the Internet era without the risk-takers.

j) *Macroeconomic stability*

A high level and high variability of inflation increases uncertainty and decreases the efficiency of price mechanisms in allocating resources. As a result, inflation tends to lower the value and productivity of investments. However, specific evidence on the relationship between inflation and growth is ambivalent: while the relationship is robust in cases of high inflation, it is less so in cases of moderate or low inflation (Bruno and Easterly, 1998). Nonetheless, it is generally accepted that inflation, particularly high and variable inflation, is inimical to growth.

Macroeconomic stability is equally relevant for the adoption and development of the ‘new economy’. In an unstable inflation-prone economy, no investments will flourish (not even ICT investments). Low and stable inflation rates are thus necessary for benefitting from the technological progress.

k) *Other factors*

The NEI could be complimented with additional variables of such harder-to-quantify factors like political freedom and stability (democracy, civil liberties, state support for the Internet), culture (openness to adoption of innovations), corruption, religion, ethnicity, or even command of English.

¹⁹ Private sector share in GDP based on EBRD data is used as a variable in covering a full sample of countries. It surely is a flawed measure since it reflects both entrepreneurial activity and progress in economy-wide privatisation. Nonetheless, a large share of the private sector in the GDP of transition countries means that, first of all, the structural reforms that promote entrepreneurship are advanced. And second, grass-roots private business has been expanding, too (in most transition countries start-up private businesses rather than privatised companies now contribute a large part of the private economy contribution to GDP).

Table 2. Competitiveness of selected countries

Country	NEI rank	NEI score	Regulations and law enforcement	Infrastructure	Trade openness	Financial system	R&D spending	Human Capital	Labour market flexibility	Product market flexibility	Entrepreneurship	Macro stability
Slovenia	1	10.1785	1.0846	1.7629	0.4393	1.2911	3.2527	1.1878	0.5269	1.0033	0.4107	0.3792
Czech Rep.	2	9.4404	0.4310	1.3205	1.0642	2.4531	2.6677	-0.2700	0.3573	1.4730	1.3349	0.3826
Hungary	3	7.3497	1.0846	1.5654	0.8087	0.8867	0.3669	0.8963	0.3361	1.4730	1.3349	0.3381
Estonia	4	7.2152	0.8232	1.1783	1.7600	0.9481	0.1329	1.1878	-0.1728	1.0033	1.0268	0.5126
Slovak Rep.	5	6.6799	-0.0266	0.8228	1.2058	1.9975	1.0688	0.3132	-0.6074	1.4730	1.3349	0.3963
Poland	6	3.7016	1.0846	0.4436	-1.3954	0.6768	0.5618	1.1878	-0.3000	1.4730	0.7188	0.3929
Bulgaria	7	2.9908	1.0846	1.0914	0.0268	0.3595	0.0159	0.0216	-0.6074	0.3769	0.7188	0.2937
Latvia	8	2.3387	1.0846	0.7596	-0.5181	-0.0040	-0.5301	0.8963	-0.1092	0.3769	0.4107	0.6221
Lithuania	9	1.6368	0.8232	0.8702	-0.2410	-0.3265	-0.0621	0.8963	-0.3424	-1.6586	0.7188	0.6357
Croatia	10	1.3759	0.8232	1.2731	-0.7521	0.8765	-0.5301	-0.5615	-0.4166	0.3769	0.1027	0.4305
Russia	11	1.0092	-0.0266	-0.0541	-0.8690	-0.6643	1.3418	0.6047	0.2619	0.3769	0.7188	-0.0039
Kazakhstan	12	0.2158	1.0846	-0.7572	0.0299	-0.7258	-0.5301	0.6047	0.6541	-0.0928	0.1027	0.3552
Ukraine	13	-0.2864	-0.4842	-0.1015	0.2238	-0.5620	-0.5301	0.6047	0.8449	0.3769	0.1027	-0.1989
Moldova	14	-0.8892	0.4310	-0.6071	0.0145	-0.4698	-0.5301	0.0216	1.0570	-0.0928	-0.5134	0.0508
Kyrgyzstan	15	-1.4902	0.1695	-1.0100	-0.3519	-0.9049	-0.5301	0.6047	0.6965	-0.0928	0.1027	0.3587
Romania	16	-1.7719	0.6271	-0.2911	-0.8690	-0.3162	-0.3351	-0.5615	0.1771	0.3769	0.1027	-0.7086
Armenia	17	-2.6630	-0.2227	-0.3701	-1.0076	-0.7616	-0.5301	0.6047	0.1347	-1.6586	0.1027	0.6699
FYR Macedonia	18	-2.7710	-0.2881	0.2382	0.2977	-0.3316	-0.5301	-1.1447	-2.1127	-0.0928	-0.2054	0.3860
Turkmenistan	19	-3.3181	-2.6414	-0.9626	1.6768	-0.4698	-0.5301	0.6047	1.2902	-1.6586	-2.0536	0.4305
Belarus	20	-3.6276	-1.7916	0.4515	0.8303	-1.0022	-0.5301	0.6047	1.0676	-0.0928	-2.3617	-2.9936
Tajikistan	21	-3.7250	-1.5301	-1.3182	2.3048	-1.0585	-0.5301	-0.5615	1.0252	-0.5625	-1.1295	-1.3961
Georgia	22	-4.0096	-0.6803	-0.6940	-1.0414	-1.1199	-0.5301	-0.2700	0.1983	-0.0928	0.1027	0.4442
Azerbaijan	23	-4.5110	-0.6803	-0.8599	-0.7459	-0.9152	-0.5301	-0.5615	-0.1304	-0.0928	-0.8214	0.6084
Uzbekistan	24	-4.5665	-0.2227	-1.0811	-0.1241	-0.8998	-0.5301	-1.7278	1.2266	-0.0928	-0.8214	-0.2742
Albania	25	-5.1069	-0.6803	-1.2076	-1.6602	1.6085	-0.5301	-2.8940	-0.4908	-0.5625	1.0268	0.5400
Bosnia	26	-7.2454	-1.3340	-0.8520	-0.5335	-0.0961	-0.5301	-1.1447	-2.9608	-1.6586	-1.4375	0.5468
FR Yugoslav.	27	-8.1505	-0.0266	-1.6105	-0.5735	-0.4698	-0.5301	-1.1447	-1.6039	-1.6586	-1.1295	-3.1988

Source: World Economic Forum (2001).

Yet, due to the very qualitative nature of these variables and for the sake of the NEI’s simplicity, these variables are not included. Nonetheless, the impact of political, social, and cultural factors on economic growth, and – in the paper’s context – on the adoption of new technologies, surely remains a rich field for further research. Slovenia scored the highest in the ranking, followed by the Czech Republic, Hungary, Estonia, the Slovak Republic and Poland. Uzbekistan, Albania, Bosnia and Herzegovina, and FR of Yugoslavia occupy the bottom of the table 2.

The results seem to agree with a common knowledge: most advanced transition countries are ranked in the leading positions. Countries where the transition process has made the least progress (Georgia, Azerbaijan, Uzbekistan, Albania) or where war wreaked havoc on the economy, as in Bosnia and Herzegovina and FR Yugoslavia, rank at the very bottom.

The NEI results also largely square with the ranking of the Global Competitiveness Report published by the World Economic Forum (2001). As one might expect, the NEI indicator of readiness for harnessing the ‘new economy’ seems to be correlated with countries’ competitiveness.

Table 3. Rankings of transition countries in Global Competitiveness Report (GCR) and NEI

	GCR	NEI
1.	Hungary	Slovenia
2.	Estonia	Czech Republic
3.	Slovenia	Hungary
4.	Czech Republic	Estonia
5.	Slovak Republic	Slovak Republic
6.	Poland	Poland
7.	Lithuania	Bulgaria
8.	Latvia	Latvia
9.	Romania	Lithuania
10.	Bulgaria	Croatia
11.	Russia	Russia
12.	Ukraine	Kazakhstan

Note: GCR lists only twelve transition economies.
Source: World Economic Forum (2001).

This suggests that fundamental institutional infrastructure responsible for the development of both the ‘new’ and the ‘old’ economy are largely the same. Hence, since both ‘economies’ rely on the same foundations, then there is no ‘new’ or ‘old’ economy: there is only one economy where old recipes for development still apply.

We have also calculated the NEI indicator for an unweighted sum of values of all variables. Table 3 shows that the NEI ranking based on the unweighted sum is largely similar to the weighted ranking.

Table 3. Rankings for weighted and unweighted NEI

	Weighted NEI	Unweighted NEI
1.	Slovenia	Slovenia
2.	Czech Republic	Czech Republic
3.	Hungary	Hungary
4.	Estonia	Estonia
5.	Slovak Republic	Slovak Republic
6.	Poland	Poland
22.	Georgia	Tajikistan
23.	Azerbaijan	Uzbekistan
24.	Uzbekistan	Azerbaijan
25.	Albania	FYR Macedonia
26.	Bosnia	Bosnia
27.	FR Yugoslavia	FR Yugoslavia

Note: first six and bottom six countries

Source: World Economic Forum (2001).

Similar results of both rankings bear proof to the robustness of the results of the indicator: if changes in weights of variables were to result in big corrections to the NEI, than it might imply that the rankings are arbitrary. As shown, this is not the case here.

6. Summary and conclusions

The information technology revolution, like all previous industrial revolutions, is poised to change the ways of doing business on a global scale and thus contribute to faster productivity and output growth. The 'new economy' has already made its impact on growth rates in developed countries. Despite the current slowdown coupled with some pessimism, the information revolution is here to stay. Only more time is needed for its benefits to feed fully through to the whole economy.

The 'new economy' has not yet, however, had any major impact on less developed countries. Nonetheless, it represents a significant potential for less developed and transition economies to attain long-term growth, sustained and fast socio-economic development, and catch-up with developed countries. However, the realisation of this potential is not automatic: it seems that sufficient institutional infrastructure must exist before these countries can tap into the benefits of the 'new economy'.

The New Economy Indicator (NEI) developed in this paper has been thus designed to show the level of institutional readiness of transition economies for adoption of the 'new economy'. As could be expected, countries most advanced in the transition process have received the highest rankings. Those countries where the process of transformation from planned economy to a market economy has progressed the least, rank at the bottom of the table. These countries risk finding themselves in the 'technological trap' where, due to the insufficient quality of institutional infrastructure, investments in new technologies may yield lower returns than investments in older technologies. Hence, older technologies can prevail over new ones.

Different speeds of adoption of technological innovations resulting from the different quality of institutional infrastructure are likely to contribute – along with the traditional ‘old’ economy – to diverging rates of economic growth and thus add to the growing income polarisation among the post-socialist economies. The most advanced countries (front-runners like Estonia, the Czech Republic, Hungary, Poland, and Slovenia) thanks to ICT are likely to speed ahead much faster, while economic growth in lagging countries (Azerbaijan, Bosnia and Herzegovina, FR Yugoslavia, and Tajikistan) may languish.

Income polarisation among transition countries is likely to grow also because of the impact of the impending accession of ten transition countries to the EU. In the long-term, the accession to the EU is set to increase gradually the value of all variables in the NEI index of all new EU members. Financial assistance from the EU to new member countries worth some EUR 40 billion between 2004-06, will improve the institutional infrastructure of the ‘new economy’²⁰.

The potential for harnessing the ‘new economy’ for faster and sustained long-term economic growth and catching-up of post-socialist countries will depend on the level of development of the institutional infrastructure. This is mostly influenced by national economic policies and strategies. The NEI index shows where much more emphasis should be put to promote diffusion, absorption, and the profitable use of innovations. All variables count for the ‘new economy’. But not only – they equally count for the ‘old’ economy. It is because in reality there is only one economy, which – as has been the case throughout the whole history of mankind – combines the old with the new.

Traditional recipes for development still hold: investment in physical and human capital will for a long time to come be the most important ingredient of fast growth. Yet, long-term growth will also depend on the speed of replacement of the old with the new. The IT revolution may accelerate the replacement process. This is particularly true for transition economies. The technological leap-frogging will not, however, materialise without appropriate institutions. Their fast build-up is the recipe for ultimate catching-up with the developed world.

²⁰ For instance, Poland is to receive EUR 1 billion in 2002 and 2003 and EUR 6.5 billion annually afterwards for infrastructure investments only (JPMorgan, 2002).

References:

- Barro, R. J., Sala-i-Martin, X. (1995), *Economic Growth*, McGraw-Hill, New York.
- Bassanini, A., Scarpetta, S., Visco, I. (2000), 'Knowledge, Technology and Economic Growth: Recent Evidence from OECD Countries', *Economics Department Working Papers*, No. 259, OECD, Paris.
- Bassanini, A., Scarpetta, S., Hemmings, P. (2001a), 'Economic Growth: The Role of Policies and Institutions. Panel Data Evidence from OECD Countries', *Economics Department Working Papers*, No. 283, OECD, Paris.
- Bassanini, A., Scarpetta, S. (2001b), 'Does Human Capital Matter for Growth in OECD Countries? Evidence from Pooled Mean-group Estimates', *Economics Department Working Paper*, No. 289, OECD, Paris.
- Benhabib, J., Spiegel, M. M. (1994), 'The Role of Human Capital in Economic Development: Evidence from Aggregate Cross-Country Data', *Journal of Monetary Economics*, October, 34(2), pp. 143-174.
- Blaug, M. (1994), *Teoria ekonomii. Ujęcie retrospektywne*, PWN, Warsaw, pp. 446-447.
- Business Software Alliance, (2001), <http://www.bsa.org/usa/antipiracy/piracyticker.phtml>
- Bruno, M., Easterly, W. (1996), 'Inflation and Growth: In Search of a Stable Relationship', *Federal Reserve Bank of St. Louis Review*; 78(3), pp. 139-46.
- Clague, C. (ed.). (1997), *Institutions and Economic Development: Growth and Governance in Less-Developed and Post-Socialist Countries*, The Johns Hopkins University Press, Baltimore.
- Clague, C., Kiefer, P., Knack, S., Olson, M. (1997), 'Institutions and Economic Performance: Property Rights and Contract Enforcement', in Clague, C. (ed.), *Institutions and Economic Development: Growth and Governance in Less-Developed and Post-Socialist Countries*, The Johns Hopkins University Press, Baltimore, pp. 67-90.
- Coe, D. T., Helpman, E. (1995), 'International R&D Spillovers', *European Economic Review*, 39, pp. 859-887.
- De Masi, P., Estevão, M., Kordes, L. (2001), 'Who Has A New Economy?', *Finance & Development*, June, Volume 39, Number 2.
- Dresdner Kleinwort Capital (2001), *Venture Capital and Private Equity Investment in Poland*, presentation by Janusz Heath (not published), 18 October.
- Easterly, W. (2001), *The Elusive Quest for Growth*, MIT Press, Boston.
- EBRD (2001), *Transition Report 2001*, European Bank for Reconstruction and Development, London.
- The Economist* (2001a), 'Brave New World', 18 October.
- (2001b), 'Statistical Illusions', 8 November.

- (2001c), 'Irrational pessimism', 6 December.
- (2000), 'Untangling e-conomics', 23 September.
- (1999), 'Working man's burden', 4 February.
- Eurostat (2001), 'Rapid Growth of Internet and Mobile Phone Usage in Candidate Countries in 2000'; quoted in: Deiss, R., 'Statistics in Focus', *Theme*, 4-37/2001.
- (2000), 'R&D Expenditure and Personnel in Candidate Countries and the Russian Federation in 1998'; quoted in: Laafia, I. 'Statistics in Focus', *Theme* 9-3/2000, http://europa.eu.int/comm/eurostat/Public/datashop/print-product/EN?catalogue=Eurostat&product=KS-NS-00-003-__-I-EN&mode=download.
- Gazeta Finansowa* (2001), 'Pierwszy rok mBanku lepszy od oczekiwań', 1 December, p. 7.
- Global Entrepreneurship Monitor* (2001), 'Executive Report', www.entreworld.org.
- Gordon, R. J. (2000), 'Does the "New Economy" Measure Up to the Great Inventions of the Past?', *NBER Working Paper*, No. W7833, August.
<http://papers.nber.org/papers/W7833>.
- Greenwood, J., Smith, B. (1997), 'Financial Markets in Development and the Development of Financial Markets', *Journal of Economic Dynamics and Control*, Vol. 21, No. 1, pp. 145-81.
- Hall, R. E., Jones, C. I. (1999), 'Why Do Some Countries Produce So Much More Output Per Worker than Others?', *NBER Working Paper*, No. W6564, June.
<http://papers.nber.org/papers/W6564>.
- (1996), 'The Productivity of Nations', *NBER Working Paper*, No. W5812, November, <http://papers.nber.org/papers/W5812>
- IDC (2000), *The 1999 IDC Worldwide Black Book*, International Data Corporation, New York.
- IMF (2001), *World Economic Outlook. The Information Technology Revolution. Chapter III*, International Monetary Fund, Washington, October.
- J. P. Morgan (2002), 'Central Europe Weekly', *Economics and Policy Research*, London, February 8.
- Johnston, D. (2001), *Future Economic Challenges for the European Economy*, WSPiZ & TIGER Distinguished Lectures Series, No. 5, <http://www.tiger.edu.pl/publikacje/dist/Johnston.pdf>.
- King, R., Levine, R. (1993), 'Finance and Growth: Schumpeter Might Be Right', *Quarterly Journal of Economics*, Vol. 108, No. 3, pp. 513-42.
- Kolodko, G. W. (2001), 'The "New Economy" and the Old Problems. Prospects for Fast Growth in Post-Socialist Countries', *Zagreb International Review of Economics & Business*, Vol. 4, No. 2, pp. 71-90.
- Kraemer, K. L., Dedrick, J. (2001), 'Information Technology and Economic Development: Results and Policy Implications of Cross-Country Studies', in: Pohjola, M. (ed.) (2001), *Information Technology, Productivity, and Economic Growth*, Oxford University Press, pp. 262-263.

- Krugman, P. R. (1997), *Development, Geography, and Economic Theory (Ohlin Lectures)*, MIT Press, Boston, pp. 1-3.
- Levine, R. (1997), 'Financial Development and Economic Growth: Views and Agenda', *Journal of Economic Literature*, Vol. 35, No. 2, pp. 688-726.
- Mohnen, P. (2001), 'International R&D Spillovers and Economic Growth', in: Pohjola M. (ed.) (2001), *Information Technology, Productivity, and Economic Growth*, Oxford University Press, pp. 50-72.
- North, D. C. (1997), 'The Contribution of the New Institutional Economics to an Understanding of the Transition Problem', *WIDER Annual Lectures 1*, UNU/WIDER, Helsinki, March.
- (1990), *Institutions, Institutional Change, and Economic Performance*, Cambridge University Press, Cambridge.
- (1994), 'Economic Performance Through Time', *American Economic Review*, 84, pp. 359-68.
- OECD (1999), *Implementing the OECD Jobs Strategy: Assessing Performance and Policy*, Organisation for Economic Co-operation and Development, Paris, September.
- (2000), *A New Economy? The Changing Role of Innovation and Information Technology in Growth*, Paris.
- (2001a), *The New Economy: Beyond the Hype*, Paris.
- (2001b), *The Science, Technology, and Industry Scoreboard 2001*, Paris.
- Oliner, S. A., Sichel, D. E. (2000), *The Resurgence of Growth in Late 1990s: Is Information Technology The Story?*, Federal Reserve Board, February, Mimeo.
- Pohjola, M. (ed.) (2001a), *Information Technology, Productivity, and Economic Growth*, Oxford University Press, pp. 11-12.
- (2001b), Presentation at the conference *The "New Economy" and Its Implications for Long-Term Growth in Post-Socialist Countries*, Warsaw, March 29-30.
- Prawo i Gospodarka* (2001), '2 mln e-klientów w 2005', 5 October.
- Quah, D. (2001), *Technology Dissemination and Economic Growth: Some Lessons for the New Economy*, paper delivered in a public lecture as part of the University of Hong Kong's 90th Anniversary Celebrations, July. <http://econ.lse.ac.uk/staff/dquah/p/0201hku.pdf>.
- Rzeczpospolita* (2002), 'Tracą najwięksi gracze', 18 January.
- (2001), 'Faktura z sieci', 12 March.
- Schumpeter, J. (1912), *The Theory of Economic Development*, Harvard University Press, Boston, translated into English in 1934.
- Stiglitz, J. E. (1998), 'More Instruments and Broader Goals: Moving toward the Post-Washington Consensus', *WIDER Annual Lectures*, No. 2, UNU/WIDER, Helsinki, January.
- Stiroh, K. (1999), 'Is There a New Economy?', *Challenge*, July/August, pp. 82-101.

- Solow, R. (1957), 'Technical Change and the Aggregate Production Function', *Review of Economics and Statistics*, August.
- World Bank (2002), *World Development Report 2002. Building Institutions for Markets*, Washington.
- (1998), *World Development Report 1998/99: Knowledge for Development*, Washington.
- (1997), *World Development Report 1997. The State in a Changing World*, Washington.
- UNDP (2001), *Human Development Report 2001*, United Nations Development Programme, <http://www.undp.org/hdr2001/back.pdf>.
- Welfe, W., Florczak, W., Sabanty, L. (2001), 'Ekonometryczne modelowanie postępu technicznego, jego efektów oraz źródeł', in: Welfe, W. (ed.) (2001), *Ekonometryczny model wzrostu gospodarczego*, Wydawnictwo Uniwersytetu Łódzkiego, Łódź, pp. 124-128.
- World Economic Forum (2001), *Global Competitiveness Report 2001-2002*, Oxford University Press, Oxford.
- Zinnes, C., Eilat, Y., Sachs, J. (2001), 'Benchmarking Competitiveness in Transition Economies', *Economics of Transition*, Volume 9 (2), pp. 315-353.

The Technology Gap and Catching-up Process in Visegrad Countries

Martin Srholec

The transition process can be considered completed, when transition economies approach the economic level of the least developed member countries of the European Union, they are sufficiently resistant to external shocks accompanying the process of financial markets globalisation and their market institutions stimulate economic agents to improvement of allocation and dynamic efficiency. Convergence toward the more developed countries requires both higher growth of incomes per capita and the capacity to maintain the positive growth differential for a sufficiently long time. Within the context of increasing income differentials considering the EU membership aspirations, the discussions after ten years of the transition process duration, focus on the evaluation of the present and prospective capacities of transition economies in transforming the system changes (so-called first transition: “from plan to market”) in sustained growth (so-called second transition: “from system changes to sustained growth”). This transformation is considered a condition of catching-up with developed countries. As to the methodology aspects, the shifting research focus requires adequate (structural, quality based) analytical methods, enabling the disaggregation (to partial elements and their inter-relations) of the so far mostly analysed aggregate indicators and focus to technological changes of production and innovative capacity of economy during the transition.

1. The first and the second transition

The key dispute in the first stage of transition (“from plan to market”) mostly concerned the sequence and speed of fundamental system changes, i.e. the fulfilment of the Washington consensus principles: stabilisation, liberalisation and privatisation. Related questions concerned sufficiency of these measures as a condition for renewal of long-term (sustained) growth dynamics in transition economies. The optimistic line of the argument started with the assumption of a direct (automatic-like) relation between the speed of economic reforms and growth performance of transition economies.

Opposing this line of argument, I do not consider the relation mentioned between the reforms and sustained growth, i.e. catch-up with the more developed countries, an automatic process. In my view, the fundamental system reforms are considered a necessary, but not a sufficient, condition for sustained growth. This view stresses comprehensiveness of the transition process (in the sense of country and time-specific social, political and technological characteristics), the role of non-economic historical factors, in the past accumulated development stressed the role of structural transformation. The real touchstone of the transition process completion is the capacity of reaching the sustained growth path, balanced internally and externally, providing efficient incentive structures. Within this context, the transition process is not

completed with the system changes as such, it requires an adequate response to the challenges of the technology revolution – the sustained growth performance is not an automatic result of the restoration of fundamental market principles.

The quantification of convergence/divergence trends in the last decade confirms the increasing differentials in per capita incomes between transition economies and between their groups (Central European and the Baltics, South Eastern Europe, CIS). The differences manifest themselves also in the development of convergence / divergence of transition economies to the average level of EU15. However, even the most optimistic scenarios assume the horizon of 15-30 years for the Czech Republic, Hungary, Poland and Slovakia – under the assumption of annual growth rates in the range of 4.5-6% as compared to 3% in the less developed EU. The increasing differences in growth performance between transition economies bring in a number of questions concerning understanding the causes of the differences and the strength of the inherited distortions makes the standard analytical framework insufficient.

2. Economics of technological changes

The role of technology change is stressed in all the theoretical approaches to growth and its determinants, though; the approaches differ in attention given to the explanation of technology change. In neoclassical models, technology is taken as public good, generally available to all countries. Consequently, economies converge to the common rate of technology change. The technology change is exogenous, its nature remains unexplained. On the contrary, the endogenous growth models take the innovation rate as the result of purposeful, profit-oriented activity of economic agents. Technology change is considered endogenous. That opens the possibility of cross-country technology differences, attention is given to the explanation of their causes. The stress on diversity of technology change, at the same time, makes its analysis difficult, in terms of aggregate concepts and indicators applied in macroeconomic modeling of economic growth. The shift of the analysis to industry level seems necessary.

The role of technology differences is stressed in the evolutionary approach, which considers technology capabilities, together with structural adjustment, as driving forces of economic growth (see: Dosi, 1988; Dosi *et al.*, 1990; Verspagen, 1993; Dosi *et al.*, 1994; Metcalfe, 1998; Fagerberg, 1994, 2000). When the dynamic adjustment takes place due to new technology solutions, and the industry structure of an economy is analysed from the view of its technology level, we use the term technology adjustment and technology based competitive advantage. Evolutionary approach considers technology based competitive advantage as the result of learning processes (technology capabilities) which are firm and industry (industry group) specific, and reflect past experience (technology accumulation). The different capacity for generation of new knowledge (innovation capability) and imitation of knowledge, developed in other countries (capability of knowledge spillover assimilation), influences (industry specific) rate of technology change. The lasting differences in this rate result in a technology gap. Backward countries, however, may improve their growth dynamics through structural change linked to technology change, the creation or transfer of which are (due to different costs and technology knowledge) country specific. This

approach considers the structural change as an interaction between economic and technology changes, stressing the role of their qualitative characteristics.

3. Technological and structural changes

Economic transition opened up new technology opportunities from which the former socialist countries had been largely isolated in the past. Structural changes accompanying transition are historically unique as to the extent and concentration in time. Their evaluation, in respect of the growth conducive impulses, starts from the differentiation between the two aspects of “creative destruction”. Productive factors are released from technologically backward (energy and material intensive) economic activities, adjusting to the pressure of falling demand and growing competitive supply (passive restructuring). Long-term growth and high export performance are conditional on restructuring accompanied by profound technology change and development of technology intensive activities, especially in manufacturing industry. Turning these opportunities into reality requires improved dynamic efficiency, in the first place, effective incentives to accumulation and diffusion of technology knowledge and development of innovation capabilities. The knowledge accumulation and its innovative application are largely specific to individual economic agents, industries and industry groups. The inter-industry differences in the capacity for technology change influence the intensity and quality of structural changes in the economy, its growth dynamics and competitiveness.

Structural change intensity reflects the structural mobility - how fast and deep the structural changes are. Within this context, the evaluation of the progrowth role of structural changes requires, besides the quantification of structural adjustment intensity, the analysis of their qualitative characteristics, which are specified in terms of factor input, technology intensity, product differentiation and market concentration, and labour skills. The combination of product differentiation and market concentration reflects the role of (non) price competitiveness and the possibility of market power exertion. The level of labour skills reflects the industry intensity in human capital. The intensity of changing qualitative characteristics reflects the transition economies capacity for taking technology opportunities.

The openness to external economic relations brings opportunities for technology catch-up and transfer of technology knowledge from the countries at the best practice frontier. The decisive role in increasing growth dynamics and improving competitiveness of transition economies will be played by the pattern of foreign capital presence in respect of the targeted industries (their technology and skills intensities), the scope of the realised activities (especially the autonomous research and development), the degree of export orientation of the domestic production and the nature of its competitive advantage (quality vs. price based).

The structural change intensity also usually increases in response to external or internal shocks. The shock impulses (in terms of changing relative prices of products and production inputs) intensify the pressure on the adjustment. The examples of such shocks are the increasing energy prices during oil-shocks in the 1970s, or the start of the transition process in the socialist countries in the late 1980s. Due to these shocks,

income declined (together with rising internal and external disequilibria). The structural adjustment capacity (degree of structural mobility) reveals itself in the speed of return to the original growth path. However, in the flexible economic system, structural changes take place continuously, even if their intensity is usually lower in the periods of stable development, reflecting rather the course of business cycles. On average (in longer time periods and in a larger sample of countries), we can observe a positive relation between the structural change intensity, and growth and export performance of national economies.¹

4. Technology intensity of exports

The evaluation of technology intensity of exports is derived from classification of industries according to their intensity in research and development and acquired technologies. The classification applied in OECD analyses is based on the combination of three indicators (see: Hatzichronoglou, 1997):

- the share of expenditures on research and development in value added,
- the share of expenditures on research and development in production,
- the share of expenditures on research and development and on technologies, embodied in intermediate goods and investment goods, in production.²

In terms of these criteria, the industries are divided into four groups: high technology, medium-high technology, medium-low technology and low technology intensive.

Viewed from the role of interacting structural and technology changes, as positive we consider the higher share of technology intensive industries, employing the inputs more efficiently, employing a more skilled workforce, and paying higher wages and salaries. These industries also have higher potential for further learning, as they open the possibility for broader application of new scientific knowledge, generate new skills and general knowledge applicable in other activities. The industries with high technology intensity are the most important source of new technologies. The more intensive technology industries have also better growth prospects: their products are highly income elastic, generate new demand and substitute the older products more quickly.

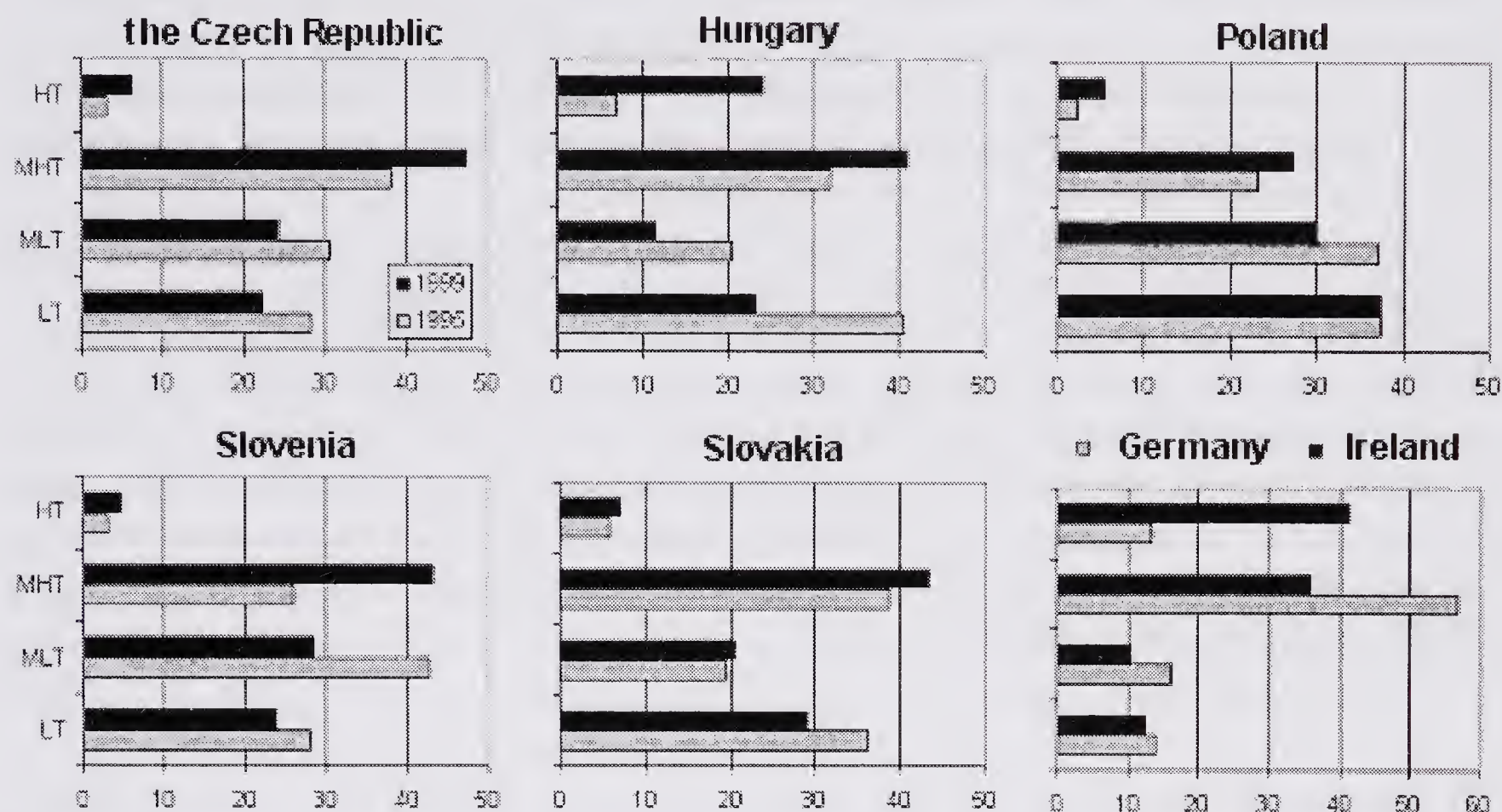
All the transition economies exhibit an increasing share of more intensive technology industries (HT+MHT). The Czech Republic takes the second position behind Hungary (65.2%, in comparison with 77.2% in Ireland, 70.1% in Germany, 66.7% in G-7.) The lowest is the share of more intensive technology industries in Poland (32.6%). The development in Hungary is largely different, as compared to the other transition economies (even to more developed countries) due to the large share of the high technology intensive industries (HT, 24.2%) which (in relatively short time) overcame the average of G-7 (19.7%) and is approaching the level of Japan. In Ireland,

¹ For example, WIFO (2000) shows the relation between the production growth and export growth, and structural change intensity in EU, in 1988-1998.

² The acquired technologies include research and development embodied in inputs and intermediate goods from domestic suppliers and imports. The share of acquired technologies is calculated in terms of input-output methods.

its share makes 41.4%, in the USA 31.0%, in Japan 25.6% (OECD STAN Industrial Database 2000).

Figure 1. Export structure: technology intensity, international comparison, 1995-99
(in %)



Note: presented sample includes (from left-upper corner): the Czech Republic, Hungary, Poland, Slovenia, Slovakia, Germany and Ireland, respectively. Data for Poland and Slovenia are from 1998 instead of 1999. Germany and Ireland only in 1999. HT: industries with high technology intensity, MHT: with medium-high technology intensity, MLT: with medium-low technology intensity, LT: with low technology intensity.

Source: Own calculations based on data of International Trade Center Database (2000).

The Czech Republic exhibits the highest share of the industry group with medium-high technology intensity (MHT) among the transition economies, however, rather due to the initial advance, as the growth dynamics of the industry group is (beside Hungary) again higher also in Slovakia. The positive characteristic of Czech exports is the lowest share of the least technology intensive group (LT) among the transition economies. The growth dynamics of the more intensive technology industries (particularly HT group) is, however, relatively weak.

The different development trend of HT and MHT groups between Hungary and the Czech Republic, suggests an interesting comparison between Ireland and Germany. While the development tendency in Hungary points rather to the structure with the dominant share of high technology intensive industries (HT), as in Ireland, the development in the Czech Republic suggests stronger similarity to the structure of Germany, i.e. with the dominant share of a medium-high technology intensive group (MHT).

Conclusions

The technological change was the strongest in Hungary, with the starting qualitative position also already on a high level. That means, favourable technology characteristics of export structure at the beginning of the considered period, projected in the marked strengthening of the initial advance at the end of the period. On the contrary, in Slovakia and Poland, the relatively high value of qualitative change is to be ascribed rather to its initial low level (catch-up effect). The change in Slovakia, however, is much stronger than in Poland, the country with much lower intensity of structural changes in exports due to lower (outward) openness.

The development in the Czech Republic and Poland points to the so far weaker capacity for closing the technology gap, or to weaker capacity for taking an opportunity of technology catch-up in improving the growth and export performance. Consequently, the more favourable future development requires higher intensity of structural changes through more vigorous market exit, which disengages production factors from the non-prospective industries. At the same time, it is desirable to support the entrance of high intensive technology economic activities (particularly through foreign direct investment) which also generate more effective pressure on improving the quality of national production factors.

References:

- Aiginger, K. (2000), *Europe's Position in Quality Competition*, Vienna, WIFO.
- Barro, R. J. (1997), *Determinants of Economic Growth: A Cross-Country Empirical Study*, MIT Press, Cambridge, Massachusetts.
- Dosi, G. (ed.) (1998), *Technical Change and Economic Theory*, Pinter, London.
- Dosi, G., Pavitt, K., Soete, L. (1990), *The Economics of Technical Change and International Trade*, Wheatschef, Brighton.
- Dosi, G., Fabiani, S., Aversì, R., Meacci, M. (1994), 'The Dynamics of International Differentiation: A Multi-Country Evolutionary Model', *Industrial and Corporate Change*, no. 3, pp. 225-241.
- Easterly, W. (1998), *The Quest for Growth*, World Bank, Washington.
- Fagerberg, J. (1994), 'Technology and International Differences in Growth Rates', *Journal of Economic Literature*, no. 3, pp. 1147-1176.
- Fagerberg, J. (2000), 'Technological Progress, Structural Change and Productivity Growth: A Comparative Study', *Working Paper No. 5*, University of Oslo, Oslo.
- Hatzichronoglou, T. (1997), *Revision of the High-Technology Sector and Product Classification*, *STI Working Paper no. 2*, OECD, Paris.
- Kaderabkova, A., Srholec, M. (2001), 'Structural changes in transition economies', *Prague Economic Papers*, no. 4, pp. 335-351.
- Landesmann, M. (ed.) (1999), *Structural Developments in Central and Eastern Europe*, WIIW, Vienna.
- Metcalf, J.S. (1998), *Evolutionary Economics and Creative Destruction*, Routledge, London.
- OECD, (1999), *Science, Technology and Industry Scoreboard Indicators 1999*, OECD, Paris.
- Peneder, M. (1999), *Intangible Assets and the Competitiveness of European Industries*, WIFO, Vienna.
- Rebello, S. (1998), *The Role of Knowledge and Capital in Economic Growth*, Northwestern University, Chicago.
- Verspagen, B. (1993), *Uneven Growth Between Interdependent Economies*, Edward Elgar, Aldershot.
- WIFO: *Specialisation and (Geographic) Concentration of European Manufacturing*, (2000), Brussels, EC Enterprise Directorate-General.

The Competitiveness of Central and East European Countries and Economic Policy towards Transition to Digitalism

Krzysztof Piech

The goal of this paper is to present the contemporary economic situation and competitiveness of chosen Central and East European countries looking at them against the background of the evolution of economic systems and EU convergence. The last term in the paper's title bases on the knowledge-based economy, which nowadays is a modern trend in socio-economic development and research in many countries. The main conclusion is that it is necessary for the CEE countries, and for Visegrad countries among others, to introduce optimal 'technological policy-mix' to increase the competitiveness of these countries in order to transform their economies from socialism through different stages of capitalism to digitalism.

1. Evolution of economic systems

While analysing the economic history of the world, it is difficult to divide the countries into the groups of rich and poor, as well as undoubtedly enumerate factors leading to the development of economies. In seventeenth and eighteenth centuries, the factors contributing to the welfare of nations started to be investigated and were identified with the amount of money, especially gold and silver, within a country. Thus according to the mercantilists, to increase the welfare of nations, there should be a pro-export economic policy conducted. However later, Adam Smith and others drew attention to the effects of the increase of money supply in circulation. He concluded that the welfare of nations depends on labour productivity, and – on accumulation of capital. David Ricardo's theory of comparative advantage should also be mentioned, according to which the countries gain superiority through their specialisation (thus, not only effectiveness of work is important, but also the alternative cost of a good's production). John Stuart Mill added to these explanations another one – the terms of trade.

With the passage of time, more advanced explanations emerged, concerning the non-economic factors as well. One of them can be an institutional sphere of the society, the importance of which was emphasised by Joseph Schumpeter. According to him, entrepreneurs, who take risks and introduce inventions to the economy, cause economic growth. However, the entrepreneurship, as Peter Drucker formulated it, means also good management. Also Robert Solow's surveys at the beginning of the 1980s confirmed the importance of technological innovations and of increase of 'know-how' in economy. However, in 1990s the growing role of knowledge was increasingly often emphasised. Some of the contemporary theories additionally underline that growth should be sustainable, which means that it cannot be the only and the most important goal, which if fulfilled, can damage the natural environment.

We should also notice the tendencies to accelerate the technological development of the world. Thus, inventions find their purchasers increasingly faster. It means that the pace of creating discoveries and inventions accelerated (partly because the older

ones are getting outdated faster). Such factors like land, labour and even capital is becoming less important, and nowadays knowledge and the speed of its creation, become the most important factor of economic development.

Another factor should also be mentioned. Countries owe economic success not only to internal, but also to external achievements, compared with the achievements of others. It was possible in the past for countries to reach internal economic growth without any external, economic relations (e.g. ancient China). It was possible to isolate a country almost completely from the rest of the world (some cases of autocratic or socialist countries). Nowadays, it is very difficult to maintain such a state. Thus, external relations contribute to the pace of economic development almost everywhere.

Of course, they do not always contribute to the increase of economic growth. Sometimes the contrary: world recessions and for example, currency crises may significantly disturb the internal economic balance of a country. Nowadays, there are often situations where countries compete for the best relations with others in order to win as much welfare as possible for them (and their citizens). Moreover, if we regard the countries with very similar internal conditions for economic growth, they win the most. They are able to obtain better external relations. Therefore, economic growth and the welfare of nations also depend on the results of competition between countries. Thus, even among the countries of the same region the 'incentives war' may appear, when they introduce new solutions to attract e.g. FDI inflow.

In addition, they depend very often on such factors as competitiveness of exports. Explained in a simple way it means that a good is more competitive when the demand increases and supply remains the same (at least in the short run). Moreover, the supply of those goods, which are new or their production is difficult, is very often limited and small. They are, for example, high-tech products. Their added value is usually larger than that of traditional goods. It means that the countries, which want to win competition with others, must specialise in the production of goods from the sector of advanced technologies.¹

However, the need for the new technologies, which more and more countries demand, will lead to the constant growth of the high-tech sector in many countries. It emerged on a larger scale in some countries and thanks to this factor they achieved a very high economic growth, especially in the second part of 1990s.²

There is no doubt that feudalism was a long lasting economic system: since the origin of the economies (not of the agricultural activity, because feudalism was an economic system) until the eighteenth century. As a system based on agricultural production, it needed only land (with some natural resources, like sun, wind, water) and labour force. In the pre-feudal period, labour was the main factor of production. Then with the progress of civilisation the unorganised groups of people started to cultivate the land and after organised into groups forming countries, economies

¹ To confirm it I recall the statement of Jerzy Kropiwnicki, one of the ministers of the Polish government (1994-97), head of the Government Centre for Strategic Studies, who asked a rhetoric question: "According to the theory of comparative costs of David Ricardo, England should specialise in production of clothes and Portugal – wine, because it will be the best for both of them. But you can see where Portugal and Great Britain now are". See: Bieńkowski (2001, p. 58).

² However this growth was not accompanied by internal balance and the overinvestment ended with stock crashes and economic recessions. It is typical in the development of new technologies (or innovations).

emerged and feudalism started. Feudalism created the agricultural society, based on very hierarchical, bottom-up relations.

After the creation of the first textile manufacturing industries and the invention of the steam engine, giving rise to the first and second industrial revolutions, the drive to make profits, created the necessity of developing a banking system. Not only was the development of labour needed for achieving success, but also capital (and its accumulation), thanks to which it became possible to build factories and manufacture products, which were more sophisticated. They became standardised, their production was specialised and concentrated. The industrial society was created.

In the middle of the nineteenth century the next step in the industrial revolution occurred. It was done by the invention and dissemination of electrical devices: followed by communication technologies. Then, after World War II, the invention of microelectronics enabled further development of economies and societies. This invention started the fourth phase of industrial revolution.

Apart from capital, know-how has also become a necessity, knowledge of how to order things to work better.³ Pure knowledge without the ability to use it was worthless. It became especially noticeable after World War II, with the works of Solow. With the progress of social development, achieved also by the more and more intensive use of new technologies, the size of the services sector in the economy increased. The society became more leisure-time consuming. It was a post-industrial society.

While analysing the economic systems, socialism should also be mentioned. However, contemporary economic history has shown that it was not a permanent system. It also underlined the importance of some inventions, like electricity, which can build industrial economy and society. As Vladimir Ilyich Lenin said: 'Communism is Soviets plus electricity'.

Although its threat caused many of the most developed countries to have more intensive social protection than previously, at the beginning of socialism in Russia. Thus, the post-war capitalist system adopted many solutions of socialism. Liberal capitalism had to reform due to the increasing threat of communist expansion. Politicians remembered also the Great Recession (1929-33) and its consequences, which in Germany led to Nazism. Thus Ludwig Erhardt and Konrad Adenauer, based on works of Walter Eucken and Alfred Mueller-Armack, introduced in Germany a new economic order – social market economy (Soziale Marktwirtschaft). The Scandinavian countries (especially Sweden) also introduced many social solutions to the capitalist system.

The last step in systems' development, which is still visible today, is the growing share of high-technology industry and services, through the use of inventions like computers and Internet, as well as mobile telephones, on-line financial transactions, digital money (instead bank-notes or coins) etc. New factors became important for economic growth replacing the old ones. "The traditional factors of production – land,

³ Here know-how means the abilities, having the skills, especially from the organisational point of view, rather than the knowledge, as a huge collection of information and the ability to use it. Knowledge has a wider meaning. It is usually divided into the tacit knowledge (know-how and know-who) and the codified knowledge (know-what and know-why).

labour and capital – are becoming restraints rather than driving forces. Knowledge is becoming the one critical factor of production.” (Schwartz, 1993) – Peter Drucker as quoted in ‘Wired’ magazine. With its use, it is possible to collect the capital, and later hire the labour force, also with expected managerial skills (entrepreneurship), and to buy a land. Possession of proper knowledge assists the earning of money, thus this factor dominates others.

Nowadays, information is becoming more important than physical goods. During industrialisation, economies were based on finite exhaustible outputs, which were produced from the transformation of raw materials. Information cannot be described by the same rules. One piece of information can be used many times without depreciating its value and ownership is not lost but shared. There was a shift in the production process from mass production to individualisation, from universalism to adjustments to the customers’ needs.

The changes in societies throughout history replaced agrarian populations with urban communities. Nowadays, we see that hierarchical, punctual, industrial society changed into a decentralised, networked information society. This process started after World War II, but accelerated at the end of the twentieth century.




The contemporary sociological changes replaced punctuality and fixed working hours adjusting to the current situation and flexible working hours, instead of centralisation is decentralisation or networks. Society needs more leisure and exchange of information. It is the information society (or its early form: post-industrial society, as called by Drucker (1993): post-capitalist society) or the knowledge society.

This society – through fast change and massive flow of information – has to adopt more knowledge, than ever before. “The illiterate of the 21st century will not be those who cannot read and write, but those who cannot learn, unlearn, and relearn.” – as Alvin Toffler has said. Thus, continuous learning is a necessity.

Nowadays, knowledge is often collected electronically, because of faster access, in comparison with traditional documents. It can be stated that the digital notation is a basis of contemporary economic development. It is achieved not only by use of the labour force, land, and money, but also by the use of electronically transferable information, stored in the form of a binary code.

“The growing codification of knowledge and its transmission through communications and computer networks has led to the emerging ‘information society’. The need for workers to acquire a range of skills and to continuously adapt these skills underlies the ‘learning economy’. The importance of knowledge and technology diffusion requires better understanding of knowledge networks and ‘national innovation systems’. Most importantly, new issues and questions are being raised regarding the implications of the knowledge-based economy for employment and the role of governments in the development and maintenance of the knowledge base.” (OECD, 1996, p. 3) Also John Dunning (1997) emphasises the need for change of the government role to be more market oriented on the present (since 1980) phase of capitalism (named “alliance” or flexible capitalism), which are dynamic and core competitive, than in previous phases (named: hierarchical capitalism (1975-1980) and entrepreneurial one (1770-1875)).

Figure 1. Evolution of economic systems

Name of a system	A kind of economy (society)	Factors of production	Main technology	Date
<i>non</i>	<i>non</i>	Labour	“muscles”	antiquity – the Middle Ages
				
feudalism	agricultural	land and labour	agricultural tools	Antiquity – 18th century
				
capitalism	industrial (production)	capital, land, labour	textile	2 nd half of 18th century
			steam engines	1 st half of 19th century
			transport (railways)	2 nd half of 19th century
			electricity, cars, telephone	1 st half of 20th century
			socialism	
capitalism with social elements	post-industrial (services)	capital, know-how, (skilled) labour	radio & television	2 nd half of 20th century
				
digitalism	knowledge-based (information)	knowledge, (skilled) labour, capital	personal computer and internet	1980s – till now

The changes in the world economy were caused by the technological information revolution, of the 1980s and 1990s and its effects will continue for the next decades. It has led to substantial changes within economies which began to be called: knowledge-based economy, e-economy, digital economy, ‘new economy’ etc. However, the changes relate also to societies, to the basics of production, and sometimes also to economics. This further stressed that the changes are not only within the structure of economy, but are deeper. They may lead to the creation of a new economic system, which I would call: digitalism (Piech, 2002).

However, contemporary changes are not as simple as they were shown in Figure 1. Countries develop in different ways and at a different pace, as shown by the difference between Third World countries, developing ones and G-7. Michael Porter *et al.* (2000) distinguishes between the following countries:

- Factor-Driven economies, where growth is determined by mobilisation of primary factors of production (land, primary commodities, and unskilled labour);
- Investment-Driven economies, which harness global technologies (and capital) to local production with the use of FDI, joint ventures, outsourcing arrangements (licensing); thus the technologies are imported;
- Innovation-Driven economies, which generate innovations and reach economic growth by facing global competition and winning it by high rates of social learning (especially science-based learning) and the rapid ability to shift to new technologies.

They co-exist throughout the world, and there are only 21 innovation-driven economies in the world today. It creates a so-called digital divide, which can be another threat to the global economy.⁴ Civilisation discrepancy can be noticed also within a country, i.e. a division into its agricultural parts, industrial, urban (focused on services) or technological (like Silicon Valley). Moreover, it can also be a threat to societies and divide people into computer- (or new-technology-) literates and the rest. Thus, the presented simplified version of system evolution of the author's origin (figure 1) does not show the changes in the whole world but the main trends in its most civilisation-advanced parts.

2. Theoretical basis of passive and active pro-competition policy

Economies may compete with others in many different ways. Their ability to compete depends on economic development strategy, which should be the basis for economic policy at least in the middle-run. The problem with economic development and policy is such that after the collapse of the socialist system and during the early stages of transition, policy makers as well as society in general, were unwilling to use state development strategies, which they associated with central planning. But it is well-known in management theory and practice that a company, which does not have a development strategy, performs much worse than those firms, which do. Thus, such a large 'company' like a state also, should have plans and strategies for a few years.

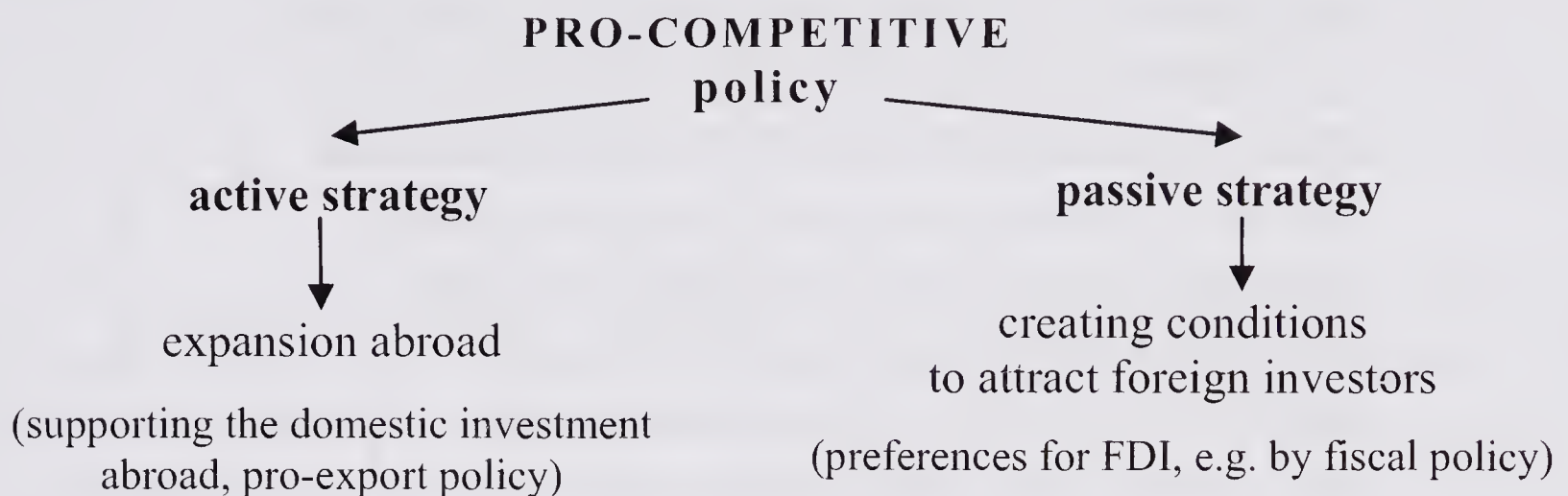
There are two main approaches to competing: passive and active. The active (aggressive or expansionist, as in: Garelli, 2001, p. 49) approach assumes the expansion over other markets. Usually it happens with the use of foreign trade, foreign investment (direct and portfolio). The profits gained abroad are transferred to the mother country.

There are also countries, that cannot afford such activities. Their economic performance is usually worse than that of the most development ones, and their export products and investment opportunities are worse, too. They can have a tendency to autarchy (very difficult and usually not favourable these days), or take steps to make

⁴ Thus, G-8 established Digital Opportunities Task Force at the G-8 Kyushu-Okinawa Summit meeting (19 July 2000), to try to prevent it (WEF, 2000).

their economies attractive enough to convince foreign companies to invest there. The passive approach does not mean no state intervention, but instead of interventionism (and e.g. state direct investment), creating favourable conditions for entrepreneurship development, including foreign capital investment.

Figure 2. Pro-competitive policy strategies



Countries can be divided into two groups, according to the competition strategy:

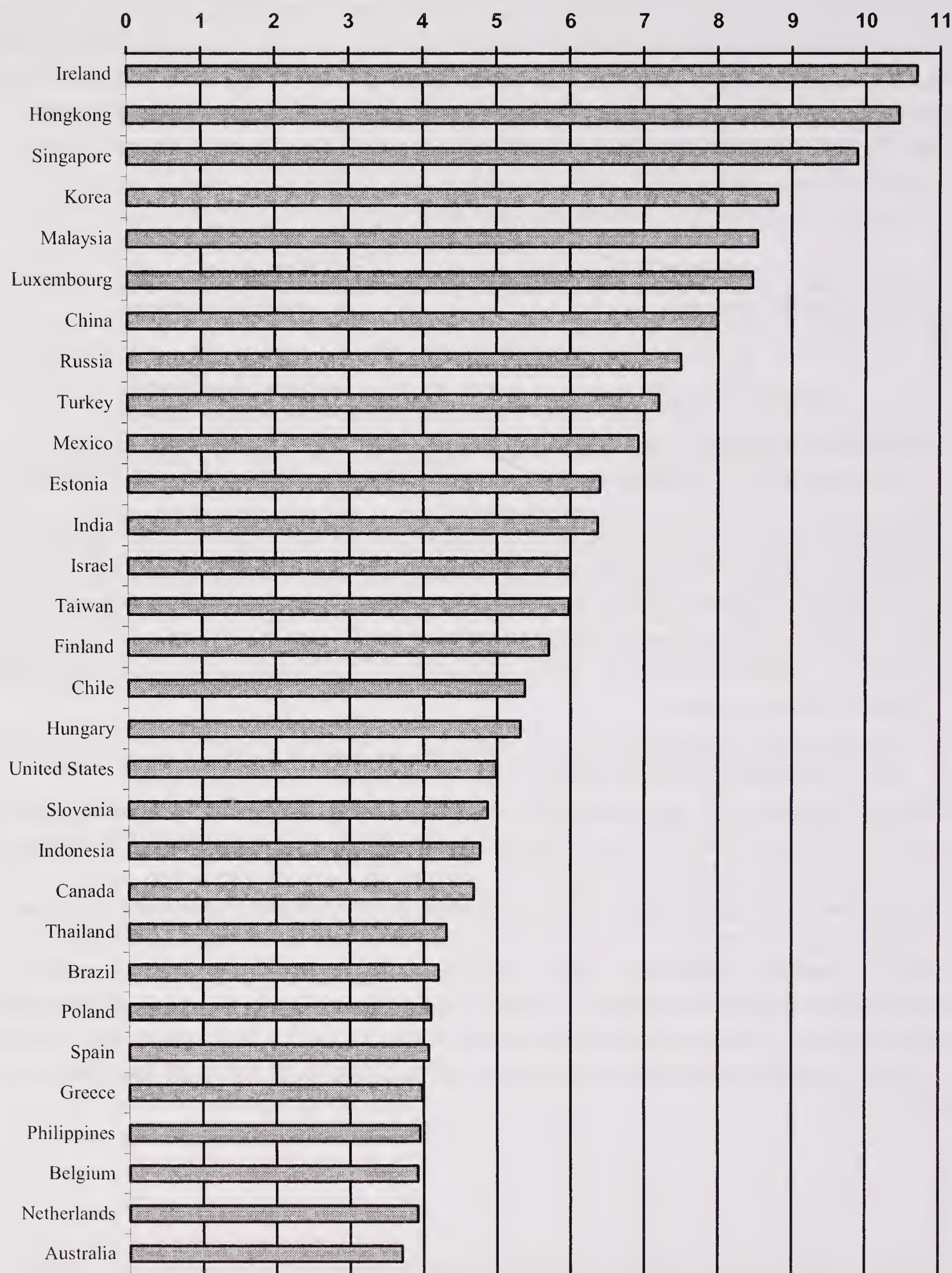
1. countries which did not elaborate and implemented a competition policy:
 - countries with very liberal governments, which do not wish to intervene,
 - countries, which were not able to implement this policy,
2. countries which elaborated and implemented a competition policy, and among them countries, which:
 - conduct active pro-competitive strategy, i.e. support exports and their foreign direct investment (e.g. Germany, Japan, Korea, the United States),
 - conduct passive pro-competitive strategy, i.e. make the national economy attractive for others (e.g. Singapore, Ireland), by introducing facilities and incentives for foreign investors,⁵
 - conduct pro-competitive policy-mix, which consists of the elements of two of the above strategies.

The countries conducting active pro-competitive policy benefit (from exports, cross-border transfers of investment profits) and – according to the mercantilists – their welfare increase. They compete not to destroy the economies, but respecting (although not always) internationally accepted, moral norms. This fight is aimed at achieving one goal – profits.⁶

⁵ It can, for instance, help in the purchasing of land by foreigners, clear and equal investment rights for domestic and foreign companies, lower taxes, help with bureaucracy, help with opening new businesses.

⁶ For example, Brazil in 1999 devaluated its real without looking at the negative effects for Argentina, in order to increase Brazilian profits from increased exports. However, the Argentinian economy does not depend strongly on the Brazilian one. Another example can be the support of the United States for China's entry to the World Trade Organisation, in order to stimulate American investment on that huge (over a billion potential customers) market. Partly due to the good pro-competitiveness policy of China, it accounts for an average annual growth rate of 10.1% (1991-2000). Thus, China's GDP doubled in ten years (!). This policy brought benefits also for American companies and the whole US economy.

Figure 3. Countries with highest real GDP growth rate in 2000



Notes: the ranking was created according to the data of IMF for the countries for which IMD makes surveys.⁷

Source: author’s elaboration based on: IMF (2001), IMD (2001).

⁷ Similar ranking makes also Swiss IMD, but some of its data vary greatly from those given by official, national statistical offices (taken into account by IMD and used in its reports).

On the other hand, if countries are able to utilise the inflow of foreign investment they can decrease unemployment significantly and this accounts for high economic growth (see: fig. 3). It should be clearly stressed, that their higher growth and employment rates were not achieved, although the countries were attractive for foreign investors, they were more attractive than other countries-competitors, also in receipt of this money.

The examples of those countries (fig. 3) show that such a strategy may succeed. Until they do not strengthen the economy enough to be more independent from foreign investment, and to develop domestic expansion abroad, they will have to conduct an economic policy, which will be very well evaluated by foreign investors for a longer period of time.

Figure 3 shows the fastest developing are those countries, which adopted the passive approach. For example in Ireland, which is often presented as a pattern to be followed by other countries, this strategy led to the average annual growth of real GDP by 9.5% in 1995-2000. After Putin became the Prime Minister, the Russian government changed the economic strategy and started to compete for foreign investment (although its very good results in 2000 resulted from the growth of world oil prices).

Another example is Estonia. This is a country that also has big chances for fast and stable growth. After the transformation economic crisis, the Estonians needed only two years, to achieve the pace of economic growth in the third year of 10.6% (!).

The Russian crisis hampered the economic growth of the former Soviet Baltic republics, but it was restored in 2000 and – according to IMF (2002) – Estonia's real GDP grew by 6.9% (Latvia 6.6%). Slovenia benefits from a proper economic policy, too (4.6% in 2000), although it is not as open for foreign investment as any other transition country is.⁸

Other trends in the world economy should be noted: the value of foreign trade in the world grew faster than world GDP: the relation of trade to GDP grew from 16% in 1974 to 24% in 1999. The pace of foreign direct investment growth increased: in 1970-85 its value doubled, but in the next 15 years – 10 times (Porwit, 2001, pp. 151-152).

Until CEE countries become economically strong enough to be able to compete with more developed ones, they should implement the passive strategy. With the inflow of new technologies, with a proper economic policy, the results in the form of faster economic growth should be seen. Nowadays, it can be accelerated by investment in knowledge creation or stimulation of knowledge and innovation inflow (through e.g. FDI). Hungary and Estonia have understood these processes and introduced substantial tax incentives for foreign direct investment, among others.

The passive strategy taken by a government does not necessarily mean that it is the only possible solution. A competition policy-mix can be used, meaning that countries can implement both strategies in parallel: active and passive ones. It is possible to attract foreign investment inflow and promote export and investment expansion abroad in those sectors, which are internationally competitive. It is also possible to conquer those markets, in which western companies do not perform so well and where present

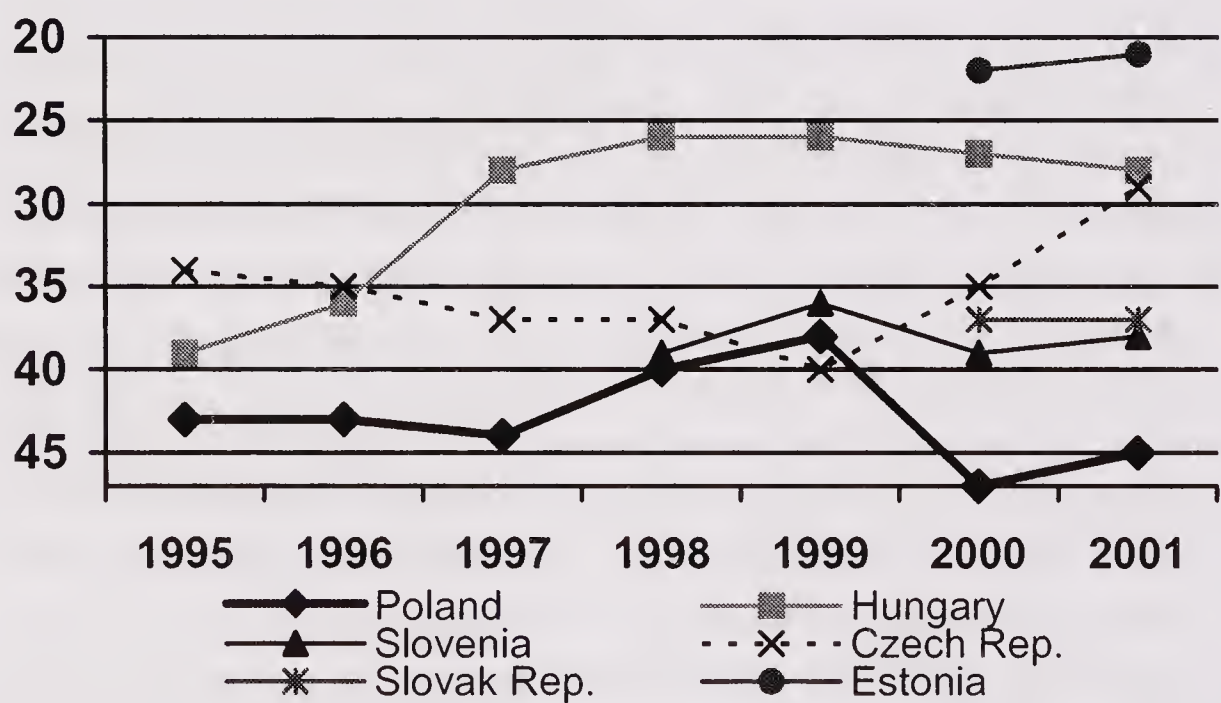
⁸ Share of the private sector in GDP was in mid-2000 only 55%, and share of FDI inflow in GDP in 1997-98 (average) only c.a. 1.3% (while Estonia – ca. 8.5%), according to the World Bank (2000).

goods can be competitive. Those are the eastern markets, i.e. the former republics of the Soviet Union. In those cases, it is possible to describe this strategy thus: *to conquer the markets, which are not taken over by others and then to survive in them*. Large international corporations can do this with the use of their own financial and technological resources. Visegrad countries mostly do not have such companies. Therefore, the state (government) should intervene to support the development of such firms, for example by promoting them. On the other hand, an increase in the risk of over-investment or misdirected investment may result, leading to losses of taxpayers' money, if the government want to engage state funds in this process. For example, if a country does not have products good enough to be competitive abroad, or if it wants to enter markets, where competition is too strong compared to the strength of the Visegrad countries, state activity will be exaggerated. Another argument is that state investment (or financial engagement) is usually not as effective as private investment.

3. Competitiveness of the CEE countries' economies

According to the Swiss International Institute for Management Development rating (IMD, 2000), Central and East European countries were placed at the following places in 2000: Poland – 40th position, the Czech Republic – 37, Slovenia – 35, Hungary – 27 (for comparison: Greece – 32, Portugal – 29, Spain 24). Thus, the worst competitive country among the mentioned above was Poland (see also fig. 4), and only seven countries were behind in this field (Turkey, Argentina, India, Columbia, Indonesia, Venezuela, Russia).

Figure 4. Global competitiveness of chosen CEE countries



Notes: data presented is not the same as the date of publication of the IMD reports. For instance, the last report (IMD, 2002) was based on data for 2001, thus this year was indicated above.

Source: IMD (2000), IMD (2002).⁹

⁹ Archive data given by IMD for various countries varied for the same year in next editions of WCY. Thus the latest possible data were used (IMD, 2002).

This could be caused by a lower starting point, but also by the lower growth dynamics (only by three places, and e.g. Greece – by eight positions, Hungary – as much as 12). This process had an even worse impact on the Polish economy in 2000 (fig. 4).

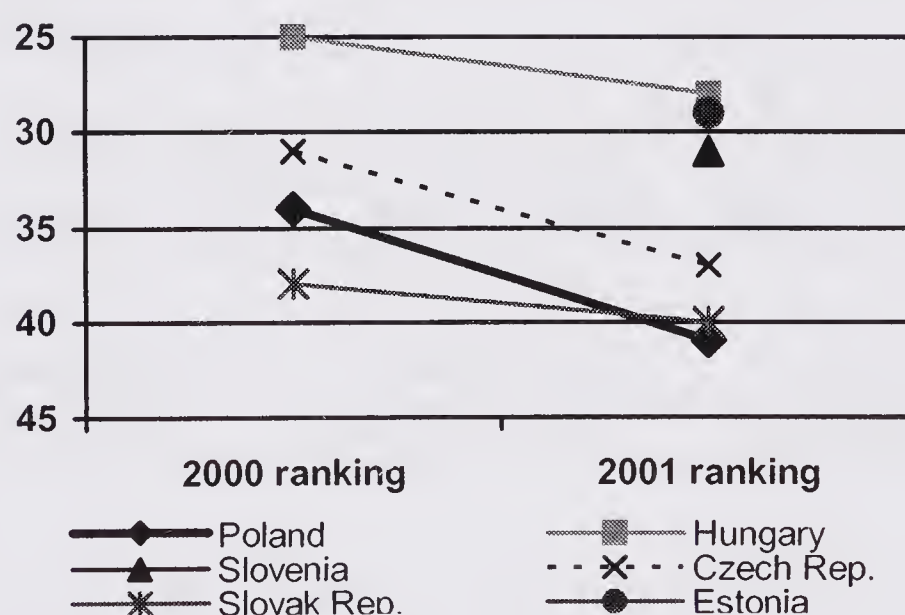
Between 1996 and 1999 overall competitiveness of the Czech Republic economy decreased – partly due to the economic crisis in 1997-1999 (see fig. 6). Poland and Hungary did not suffer the post-transition crisis (as I would name it), but the differences in competitiveness and its dynamics are plain to see (fig. 4). Hungary overtook Portugal and Greece in this field, while Poland is far behind. However, Hungary's reforms have slowed down since 1999, after positive implementation of Bokros plan, introduced there after the banking crisis. Recalling logics of economic recessions, the following conclusion can be derived: after recent (2000-2001) recession in Poland, the necessary fundamental economic reforms should appear reflecting microeconomic performance, which should have effects both on GDP growth rate as well as on the competitiveness of Poland.

One of the most important aggregates that decided the place in ranking is the pace of real GDP growth.¹⁰ For instance, in the case of Poland, in order to return to the satisfactory development path, it is necessary to increase the growth rate at least by five percentage points, in comparison to the situation in 2002. As far as the growth rate is concerned, other countries were able to experience similar results in previous years: real GDP growth in 1997-2000 was for: Poland – 19.8%, Estonia – 20.7%, Hungary – 19.25%, Slovenia – 18.4%.

The World Economic Forum annually publishes its report on competitiveness of countries. The last one (WEF, 2002) included evaluation of 75 economies. It created two main, complementary indices of competitiveness: Global Competitiveness Index (GCI) and Current Competitiveness Index (CCI).

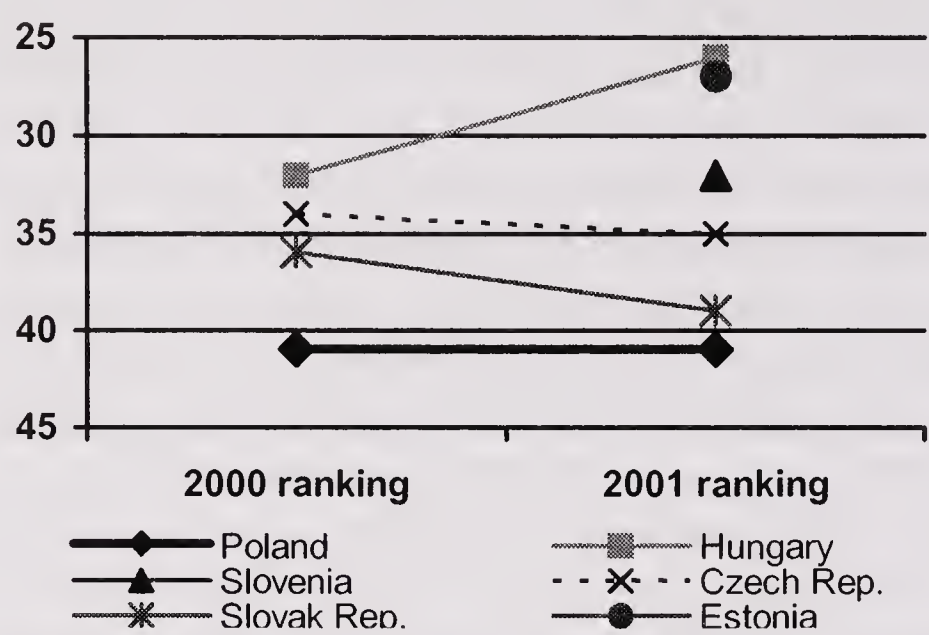
Figure 5. Overall competitiveness rankings of chosen CEE countries

Fig. 5.1. Growth Competitiveness Index



¹⁰ Because it influences many other factors, as well as being a result of many phenomena – and not because this (GDP) indicator is biased with a larger weight.

Fig. 5.2. Current Competitiveness Index

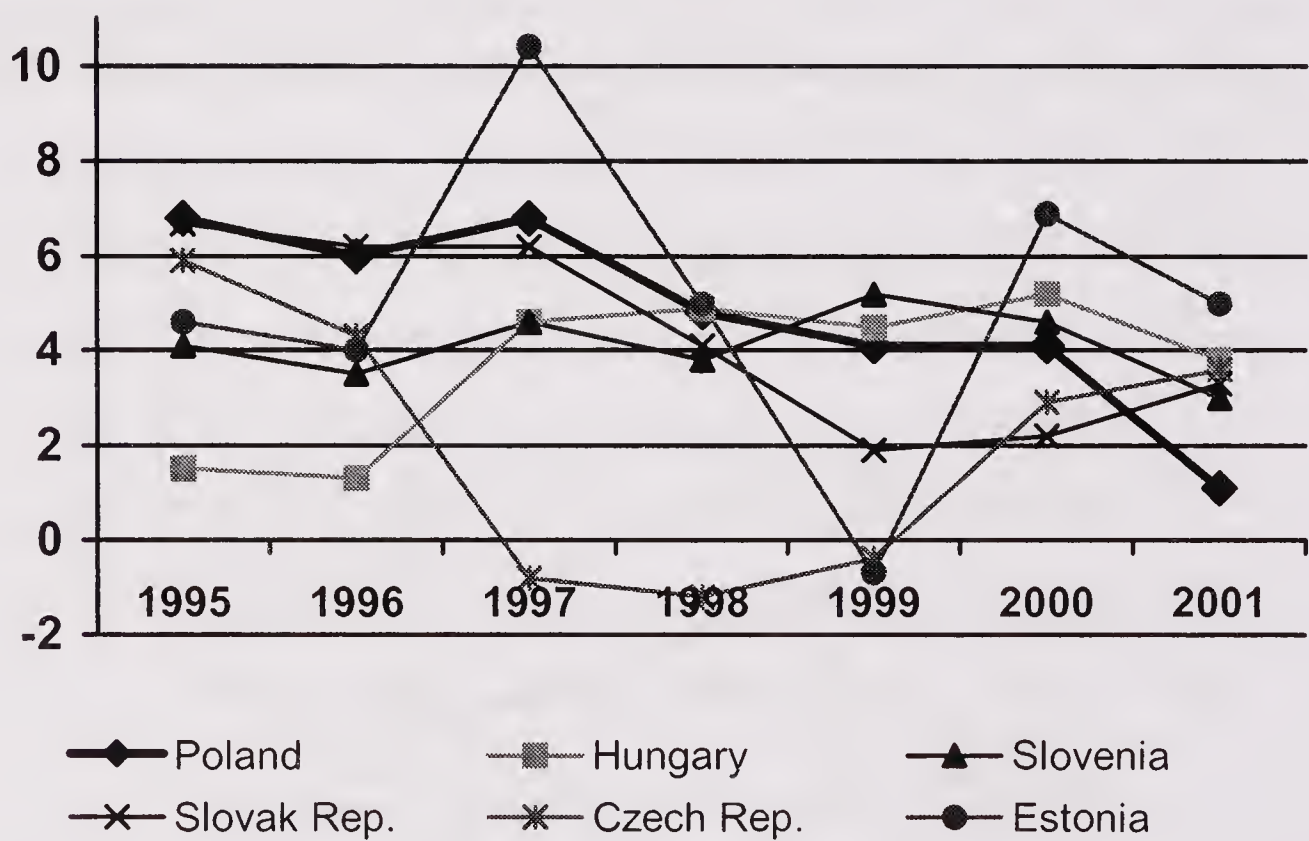


Source: WEF (2002).

The first one led by Jeffrey Sachs is aimed at presenting the medium-term prospects for economic growth (in five years), and the second, led by Porter – the current productive potential of the sample of 75 countries (figure 5).

The results show that Poland is in the middle of the analysed group. The first place in 2001 ranking was occupied by Finland (in both cases of indices), the second – the United States.¹¹

Figure 6. Dynamics of real GDP growth rates of chosen CEE countries



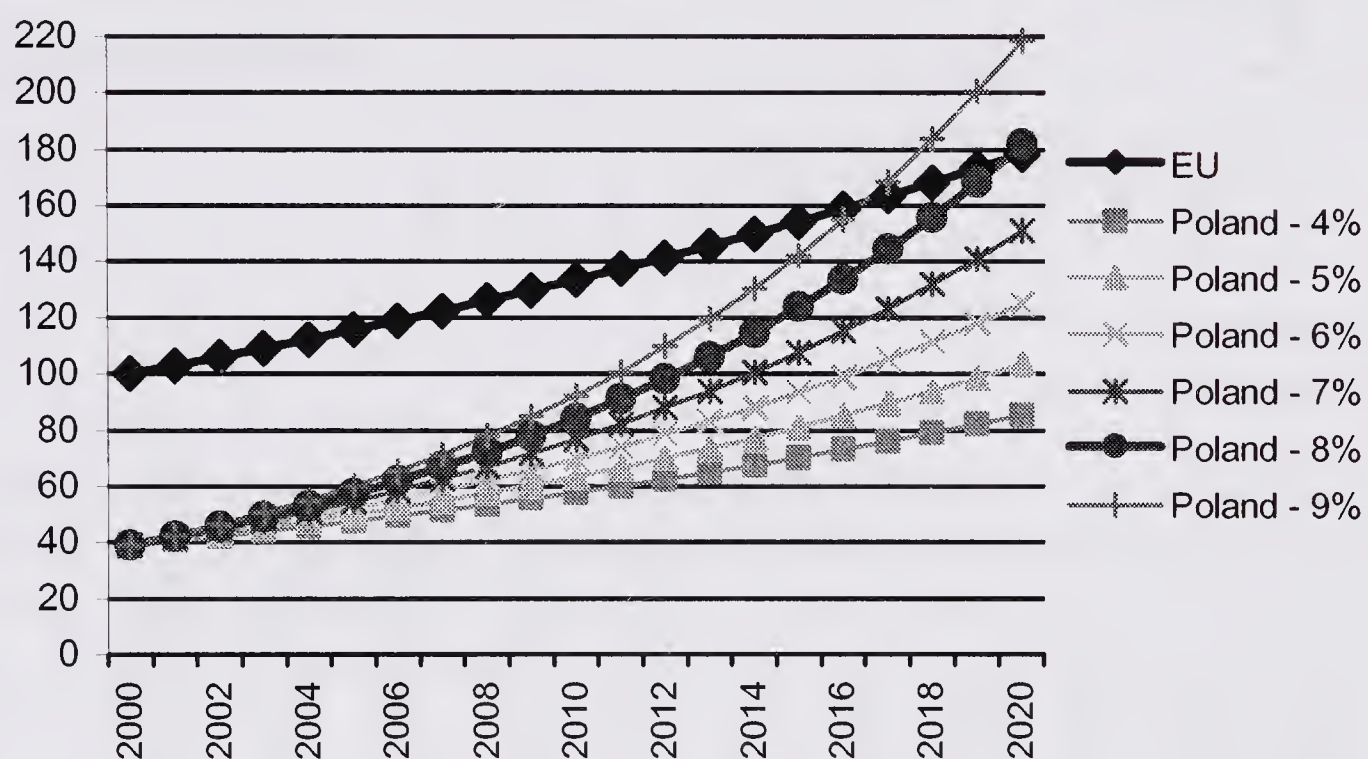
Source: IMF (2002).

¹¹ Then as far as GCI is concerned: Canada, Singapore, Australia, Norway, Taiwan, the Netherlands, Sweden, New Zealand, Ireland and United Kingdom; and if CCI is looked at: the Netherlands, Germany, Switzerland, Sweden, the United Kingdom, Denmark, Australia, Singapore, Canada and France.

From all six, transition accession countries looked at above, Poland was placed at the lowest level. In both cases its position was 41st. The most advanced in competitive abilities was Hungary, and just behind it – Estonia. In terms of GCI, Poland was the fastest falling country from those analysed above, showing not such good prospects for this country. In the case of CCI, Hungary improved its current performance significantly, while Poland remained on the same level.

According to the data available, and assumptions accepted (see note under fig. 7), I made a simulation of the changes of distance of Poland to the average level of development of the European Union by the year 2020 (fig. 7).

Figure 7. Scenarios of Poland's convergence to the EU average (real GDP, PPP)



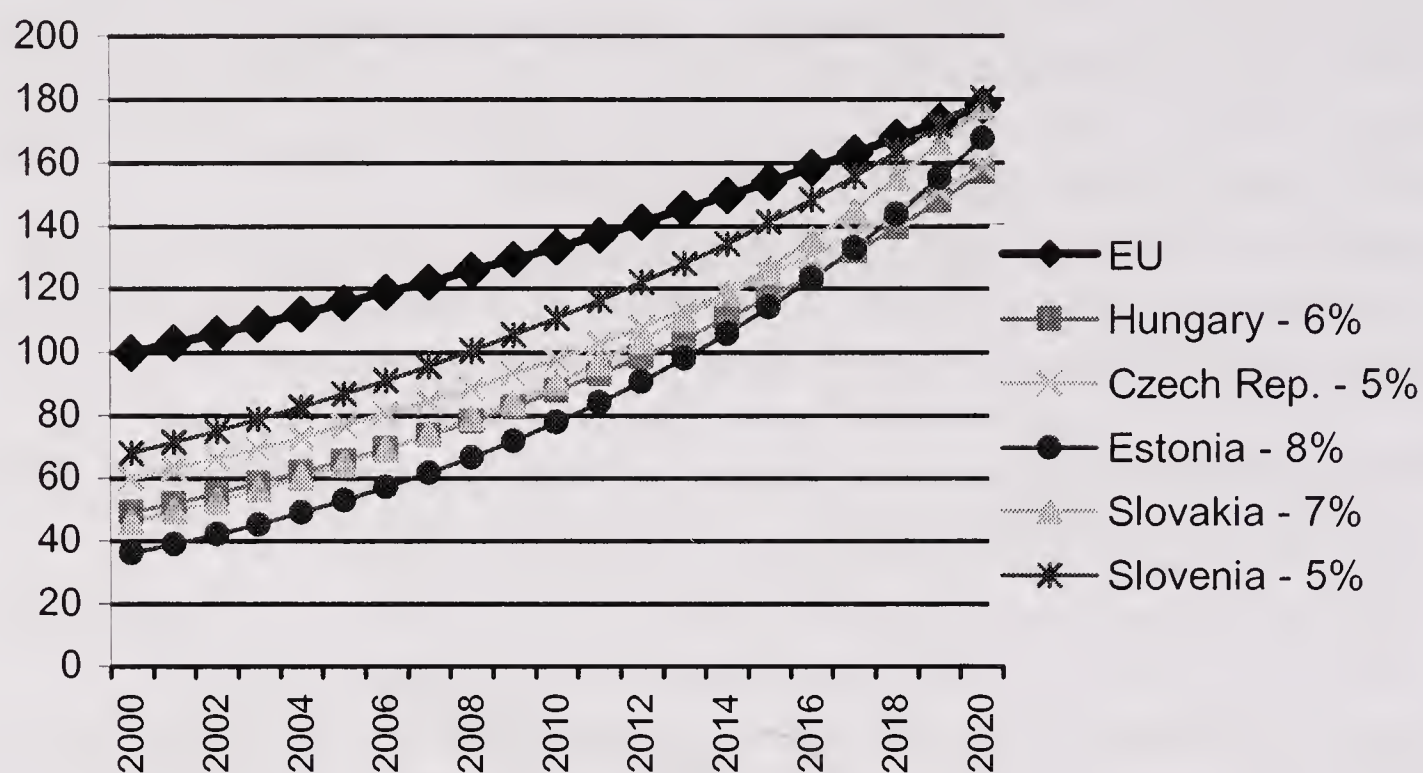
Notes: it was assumed that EU would develop on average at the same pace as in previous years (average from period 1998-2000 was taken, i.e. 2.93%); Poland starts from the level of 39% of the EU average (regarding GDP per capita PPP). It is also assumed that the EU will develop at the same pace after enlargement, which additionally will not change the distance of Poland to the UE-15 average.

Source: Eurostat, own counts.

The conclusion is that almost 8% of annual growth will lead Poland to reach the average level of the EU in 2020. Some other countries, such as Slovenia, are in a better position, because they start from a higher level. According to Eurostat, the highest level of GDP per capita in terms of PPP (1999) as far as candidate countries are concerned has Slovenia (68%) and the Czech Republic (60%), then Hungary (49%), Slovakia (46%), Poland (39%) and Estonia (36%). Their scenarios of convergence with the minimum annual GDP growth needed to real convergence to EU-15 average are shown (fig. 8).

If we assume that the pace of growth of Estonia and Poland as it was in 2000 does not change, Estonia will catch Poland up in 2003 and will catch-up with the European Union before Poland.

Figure 8. Minimal pace of real GDP growth for chosen CEE countries to catch up the EU average (real GDP, PPP)



Note: see previous figure.

Source: Eurostat, own counts.

According to Morita (1999), based on data from 1998 (taking dollar-denominated GDP instead of real GDP based on PPP), Poland will catch up with the GDP level of Spain in 15 years if it develops at 9% level annually, in 16 years if 8%, in 19 years if 7%, in 22 if 6%, in 26 if 5%, 32 if 4%. The real convergence of Poland to the GDP level of Portugal will be: 12 years if 9%, 13 – 8%, 15 – 7%, 18 – 6%, 21 – 5%, 26 – 4% and to Greece: 12, 14, 16, 18, 22, 27 years respectively.

4. Competition policy in CEE countries

The group of countries expected to enter the EU in the next wave of enlargement is Cyprus, the Czech Republic, Estonia, Hungary, Latvia, Lithuania, Malta, Poland and Slovenia. They will probably be followed by a second wave of five countries including Bulgaria, Romania and Slovakia. Global scores of candidate countries in terms of competition policy are similar. However, their policies vary in details.

4.1. Competition policy in CEE countries – some remarks

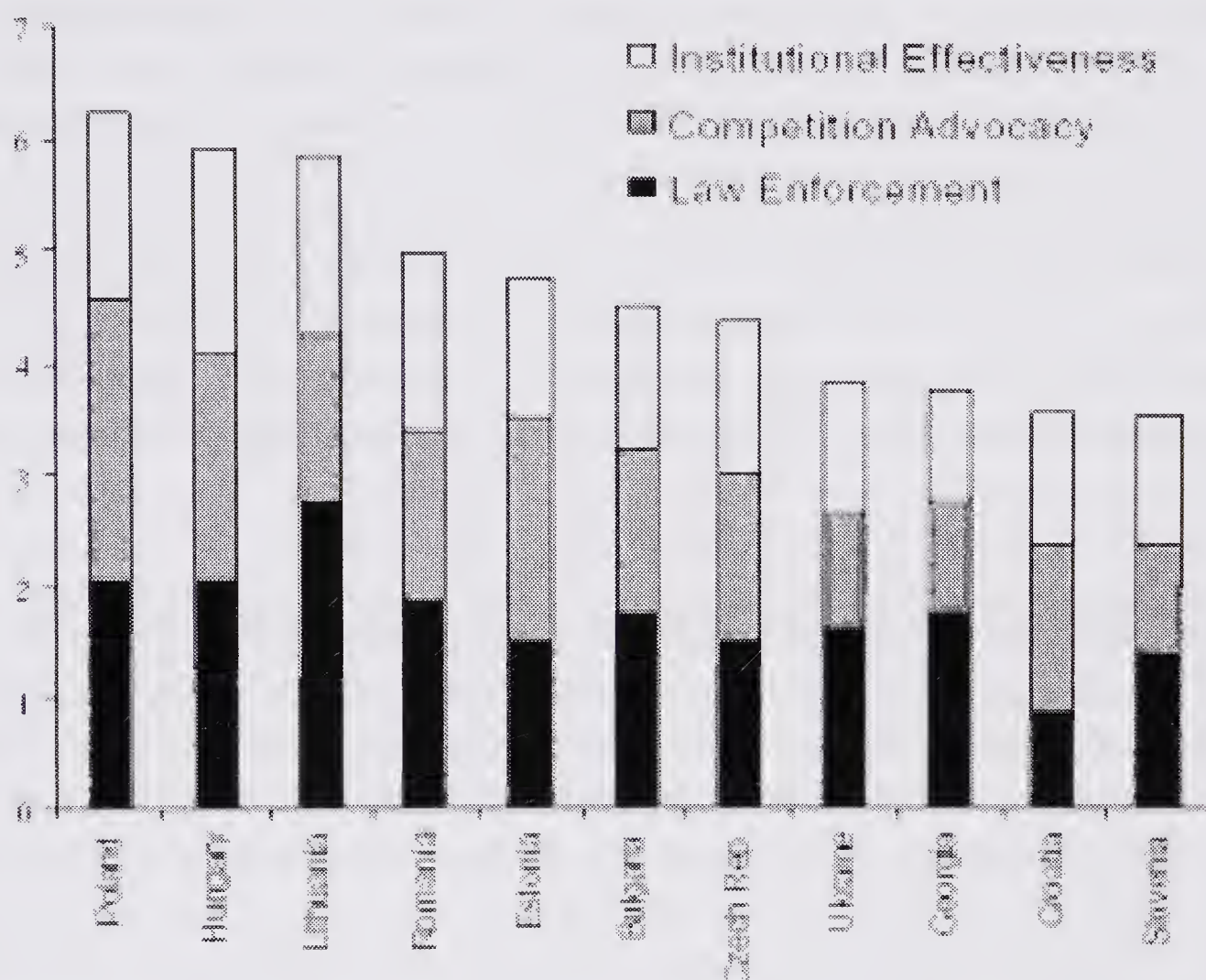
Figure 9 reports implementation effectiveness based on data for 1996-97 for 11 transition countries. As Dutz *et al.* (1999, p. 6) noted, Poland and Hungary, the first adopters of competition law, the Baltic states and Romania have the most effective overall implementation of competition policy.

The evaluation done later by the EBRD (2000) shows that indicators describing competition policy for Poland, the Czech Republic, Hungary and the Slovak Republic had a value 3, and for Estonia, and Slovenia – 3 (within a scale from 1 to 4 where 1 implies little or no progress with reform and 4 implies a market economy). Other transition countries reached worse results.

Some countries, due to the introduction of very innovative solutions in economic policy, may substantially increase their competitiveness and develop faster.

The reforms introduced in Russia (especially tax reform) may negatively influence the inflow of foreign capital to CEE countries. Transition countries suffer the lack of the middle class, which is (including e.g. entrepreneurs) often an engine of economic development. Those countries have greater chances for development where low taxes for this group of society are introduced and economic freedom ensured. One such policy innovation is the introduction of a flat personal income tax rate. Russia, Estonia and Latvia have done so (13%, 25% and 26% respectively), and this was well recognised abroad (although not always within the country). It can also stimulate to some extent, labour force emigration to less fiscally burdened countries.

Figure 9. Competition policy implementation in 1997 – effectiveness indices



Note: Equal weights to nine dimensions grouped into three categories, divided into three categories were assigned, namely (1) law enforcement, (2) competition advocacy and (3) institutional-related activities. Each dimension was assessed on a 0-1 scale.

Source: Dutz *et al.* (1999).

International fiscal competition exists also in the field of companies. Estonia introduced 0% rate for companies that re-invest all their profits in the country. This solution may convince some firms to move their location there (especially from neighbouring Finland). Additionally, Estonia's international relations are also well seen and evaluated, thus improving its image abroad. As far as corporate taxes are concerned, Hungary also introduced incentives favourable for FDI, significantly lowering their rates. The Czech Republic competing for huge investment from Toyota in 2001, also introduced some incentives to attract this company. Later, when Poland lost the opportunity to build a large Toyota factory, after heavy criticism from public

opinion, parliament also passed a special law (2002), which convinced the Japanese management of Toyota to increase the value of investment in Poland.

Nowadays, the competitive fight between the countries is won by those who are able to use its strengths and gain an advantage. It means for some smaller countries the necessity of specialisation, a position taken a long time ago by David Ricardo in the framework for the theory of comparative advantage.

Examples of successful implementation of such economic development are well-known. The development of information technologies was in the last few years the priority of economic policy of, for example, Ireland and the Scandinavian countries. Estonia and Latvia also tried to expand it. Spain became for the European Union the bridge in trade with Latin American countries. Germany, the United Kingdom, France and Italy have universally developed economies, so they do not have to specialise in certain directions. But even they, like Germany, may be left behind an IT revolution and would not be able to profit from modern processes of IT development. Poland's economy is not so large. It has also less tourist potential, unlike Greece, Italy, Slovenia or Spain. It obviously cannot also use the advantages of such a country as Luxembourg and specialise mostly in financial services. It is, unfortunately, also far behind the world technological changes and even other transition economies, like Hungary, the Czech and even Slovak Republics (OECD, 2001; OECD, 2002; Srholec, 2002; WEF, 2002). Hungary profits from its international openness and, through its high-tech exports driven by FDI companies, is relatively technologically advanced, not only as for a transition country, when compared to some EU members (European Commission, 2001, p. 59).

4.2. Competition policy for Poland – some recommendations for strategy

One of the changes, which Poland may use, is the role of a country enabling West-East economic contacts.¹² However, it cannot be the only 'export product' of Poland. This way adds not so much value and will keep Poland away from contemporary economic system changes. Also western countries may establish and develop such relations of their own, without Polish intermediations, and even if so, also the Baltics or the Czech and Slovak Republics are willing to play a similar role. Besides, such a strategy will be successful only if Russia and Ukraine develop steadily, still difficult to achieve, especially in the case of Ukraine. The role of intermediary also brings few profits, in the case of Russia or Ukraine at their present state of economic development, especially when compared with profits possibly derived from the high-tech sector.

It is possible for Poland to choose the strategy of a large country and develop in many different directions or to concentrate on some chosen independently by the state (and not e.g. by labour unions, certain industrial lobbies), according to world, well-known trends of economic progress, e.g. high-tech industries (with biotechnology). However, it requires a conscious, at least middle-run, consequently run strategy of economic policy, which Poland nowadays does not have. Struggling with current problems, the main policy makers forgot about the future of several-year perspective.

¹² The choice of such a way suggests e.g. former main negotiator of Polish association treaty with EEC (Mulewicz, 2001).

One of the crucial elements of such a strategy is education. Countries may gain competitive advantage in a short- or middle-term through the cheap labour force. TNCs investing in such countries are also interested in minimising these costs, and will not be so interested in countries, where with the growth of productivity, exports etc. and welfare, personal income increases, too, what would induce the pressure for growth of salaries. It may lead to withdrawal from such a country and move to the cheaper ones. Thus, the proper economic policy in the long-run and in an open economy is to concentrate on an increase in labour skills. This factor can sustain economic growth, when the costs of labour increase and TNCs will want to leave the country.

Estonia and Latvia, for instance (not mentioning obvious Scandinavian countries), noticed this necessity and support actions towards education, especially technical education. Similar factors also make poorer countries, like India, which despite huge emigration of specialists, does not stop the education policy, but tries to attract them and keep within the country. Anyway, such an education policy is profitable in the long-run. However, it does not refer to every kind of education. The transition countries should concentrate more on higher and adult education (continuous learning) instead of – giving up the free room of manoeuvre to the teachers' labour unions – maintaining relative over-investment in primary and secondary level education (as it is in Poland), to invest in third level education (a very high, 5th position in ratings of total expenditure for education; IMD 2000; see also EC, 2001, p. 67).

Higher education usually lasts 4-5 years, but the technologies (especially information ones) change faster than the educational systems. Thus the countries should develop systems of continuous learning, life-long learning and just-in-time learning (Piech, 2002b). Some human capital can also be imported, when there is lack of it or its education may last too long or be too expensive. Some countries do so, through reducing barriers of receiving permissions for stay and work, e.g. Canada, the US, New Zealand, and to some extent – Germany.

In order to catch up with the most developed countries, many of them conduct an active economic policy, especially a pro-competitive one. There are some instruments and policies, which can be used to do so, connected with e.g. fiscal, customs and investment policy.

Should countries really use investment policy? In my opinion, there is too high a risk of policy mistakes (policy failures) and overinvestment, what finds support in the results of empirical research. According to Wolfgang Michalski (2000, p. 64), 95% of all industrial policies have failed. They were concentrated on an increase in state expenses on huge industrial projects, what led to their ineffective usage. It is the argument for conducting a passive, pro-competitive policy on international markets: to create a favourable environment for foreign and domestic enterprises without direct state intervention.

Bieńkowski (2000, p. 13) enumerated three groups of activities to conduct effective, pro-competitive economic policy:

1. reduction of inflation and increase of economic freedom through tax cuts; antimonopoly policy and deregulation of prices and capital flow; clear and stable economic policy;

2. supporting and improving of the law, a system of private and public institutions responsible for economic and social life; transparency of government and administration; increasing the quality of institutions to decrease the transaction costs;
3. “politically neutral small industrial policy”, concentrated on strengthening the economy without favouring any sector through: development of infrastructure, natural environment protection, social education especially in computer sciences, public security.

Although Bieńkowski is in favour of development of all sectors, he underlines the role of computer science. In my opinion, Poland and the other CEE countries should also introduce a long-run pro-competitive policy, beginning with one for education, as soon as possible (in the case of contemporary Poland, after getting out from the bottom of the present recession, which should happen around 2002 and 2003), especially in the fields of information technologies, and widely-understood finance.¹³ Without it, Poland will not be able to capitalise on time and profit from the knowledge-based economy and the information revolution as well as enter the digitalism era.

One of the factors which influences the pace of economic growth on a large scale, is export. The branches, which have the largest share in Polish exports, were (in 2000): automobiles – 2.5bn dollars, clothes – 2.5bn dollars, furniture – 2.0bn, machines – 1.9bn. The furniture industry for instance, had a share of 6% of total Polish exports (c.a. 2% of GDP). The structure of Polish exports on a large scale is based on products, which do not require much knowledge and high technologies (Srholec, 2002). From the above mentioned, the most technologically advanced is the automobile industry, but it does not deliver very modern and internationally competitive products. Thus, Polish exports (and economy) dominate branches, which are not technologically advanced and knowledge-intensive.¹⁴ This situation is likely to be sustained, without state activity. It means that the perspectives to catch-up with the EU are far away. And the catch-up process which requires over 7% of annual growth until 2020 to reach the average level of the EU, will be very prolonged. With the use of present, old-fashioned potential only, which additionally seems to be exhausted (in the present state of business cycle, i.e. recession), Poland will be able to achieve about 4-5% stable growth in the long-run (since 2004), and will not achieve the pace of 7-10%, which would also be also possible (see figure 3).

5. Conclusions

When the present, downward phase of the world and Polish business cycle (due to its large connection to the world cycle; Piech, 2002c) ends, Poland will be able to introduce a proper, pro-competitive strategy, which it really needs. A key condition necessary to accelerate the pace of real convergence is an increase of competitiveness of domestic production, “which requires modernisation of production and exports based on it, towards branches connected with contemporary high technologies. The

¹³ Poland ranks only in 39th position in IMD (2000), one of its five weakest points in this category.

¹⁴ Thus, some Polish economists support the opinion for the necessity of Polish economic transformation from the coal-based economy to the knowledge-based one – Kukliński (2001).

future of the country depends on the achievement of Polish companies to participate in the world competition race.” (Sadowski, 2001, p. 14) Such a competition policy should be, in my opinion, introduced in Poland at the end of 2003, when the cyclical recession in Poland is expected to be at least partially overcome, and then conducted in the following years, as a strategy for Polish economic development. Education and science (R&D) should be put in the first place of government interests for long-term development. This is one of the key points of the now emerging knowledge-based economy. Sachs suggested such solutions (during a lecture given at the Warsaw School of Economics in 2001), too, adding that they should be introduced as soon as possible (even in 2001). Unfortunately, present budgetary problems and lack of political will (or even of proper consciousness of most politicians), postponed them.

Poland should enter the new era of socio-economic development using new technologies, derived through innovations. Although according to Gordon, innovations were more critical for economic development of the breakeven of the nineteenth and twentieth centuries, in terms of their influence on labour productivity, they are one of the most important factors of economic growth. Also according to Gordon (1999), the most important clusters of inventions were electricity (the electric engine, electric light, home electric appliances), engines (for car and air transport, highways, supermarkets, suburbs), “molecular engineering” (petrochemical products, artificial stuff, pharmaceuticals), communication / entertainment (telephone, radio, film, television). The most important innovations of the end of the twentieth century are information technologies (including PCs, internet), and genetics (genetically modified food, pharmaceuticals).

“Knowledge is perhaps the most critical competitiveness factor. As countries move up the economic scale, the more they thrive on knowledge to ensure their prosperity and to compete in world markets. How that knowledge is acquired and managed is each nation’s responsibility.” (Garelli, 2000, p. 47) If Polish and other CEE countries economic politicians do not forget about it, they will significantly increase the chances for faster EU catch-up.

The following economic policy steps may be taken, to increase competitiveness and to build the knowledge-based economy in CEE countries, aimed at beginning (or in some cases endeeppen) the transition to digitalism:

- To ensure the independent and strong monetary policy (to ensure economy fundamentals).
- Economic policy should be conducted as a response to the markets’ (not budgetary or output allocation) needs.
- Pro-competitive economic policy: stimulation of FDI inflow, efforts to increase export competitiveness etc.
- Entrepreneurship stimulation, especially of the companies, which want to implement innovations and new technologies (but needs some support).
- Support for technology import, but also efforts to domestic knowledge creation.
- Development of infrastructure (telecommunication, fibre backbone networks support).
- Global passive industrial policy, moderate activity in new technologies only.
- Internet policy to reduce costs of internet access and enlarge its accessibility.

- Steps to stimulate information society development (according to EU requirements and advice).
- Support for internationalisation of domestic companies' activities.
- Changes in public administration in the direction of intensive use of technologies (e-government solutions, with e-sign acceptance, WWW pages for public administration).
- R&D policy directed to market needs; increase of scientists international exchange, more investment in best performing sciences.
- Introduction of competition and market economy at universities (true competition for every academic post, short- or middle-term contracts with renewal option instead of almost 'life-time employment', rationalisation of expenditures, accreditation and incentives for education level upgrading).
- Support for patents registration (faster procedures and help with patenting abroad), dissemination and accessibility of knowledge and counselling.
- National systems of continuous learning (and support for e-learning).
- International research on foreign experiences with knowledge-based economy development policies aimed at indicating the ways of introducing them in certain CEE countries and practical economic policy, implementing these results.

The thing that Central and East European countries needs now is the entrance to the second phase of economic transition, through the use of technological achievements and the globalisation process (Sadowski, 2001, p. 14). It should be the transition towards digitalism, or its first step – the knowledge-based economy, that will increase the global competitiveness of Poland and other CEE countries, as well as ensure constant, long-term, fast economic development and an increase in societies' welfare.

References

- Bieńkowski, W. (2000), 'Competitiveness of the Polish economy on the eve of integration with European Union: can the government be more active?', *Warsaw School of Economics' World Economy Research Institute Working Papers*, no. 209, Warsaw, May 2000.
- Bieńkowski, W. (2001), 'Polityka ekonomiczna i jej wpływy na konkurencyjność gospodarki we współczesnym świecie. Wnioski dla Polski', in Bossak, J. and Bieńkowski, W. (eds.) (2001). *Konkurencyjność gospodarki Polski w dobie integracji z Unią Europejską i globalizacji*, part I, Instytut Gospodarki Światowej SGH, Warsaw.
- Drucker, P. (1993), *Post-Capitalist Society*, HarperCollins, New York.
- Dunning, J. (1997), 'Governments and the macro-organization of economic activity: an historical and spatial perspective', *Review of International Political Economy* 4:1, Spring 1997, pp. 42-86.
- Dutz, M. and Vagliasindi, M. (1999), 'Competition policy implementation in transition economies: an empirical assessment', *EBRD Working Paper*, No. 47, December.
- EBRD (2000), *Transition Report 2000: Employment, skills and transition*, London.
- European Commission (2001), *Innovation Policy Issues in Six Candidate Countries: The Challenges*, Office for Official Publications of the European Communities, Luxembourg.
- Garelli, S. (2000), *Competitiveness of Nations. The fundamentals*, in: IMD (2000), *World Competitiveness Yearbook*, Lausanne, pp. 47-53.
- Gordon, R.J. (1999), 'U.S. Economic Growth Since 1870: One Big Wave?', *American Economic Review*, No. 2.
- IMD (International Institute for Management Development) (2000), *World Competitiveness Yearbook*, Lausanne.
- (2001), *World Competitiveness Yearbook*, Lausanne.
- (2002), *World Competitiveness Yearbook*, Lausanne.
- IMF (2001), *World Economic Outlook*, Washington, Spring.
- (2002), *World Economic Outlook*, Washington, Spring.
- Komitet Prognoz „Polska 2000 Plus” przy Prezydium PAN (2001), *Strategia rozwoju Polski do roku 2020. Synteza*, Warsaw.
- Kukliński, A. (2001), 'Od G.O.W. do G.O.W. Od gospodarki opartej na węglu do gospodarki opartej na wiedzy', in Kukliński, A. (ed.), *Gospodarka oparta na wiedzy. Wyzwanie dla Polski XXI wieku*, State Committee for Scientific Research of the Republic of Poland, Warsaw, 2001.
- Michalski, W. (2000), 'Długookresowe prognozy rozwoju gospodarki światowej', paper delivered in Governmental Center for Strategic Studies, Warsaw, July 1999; in Bieńkowski, W. (2000). 'Competitiveness of the Polish economy on the eve of integration with European Union: can the government be more active?', *Warsaw*

- School of Economics' World Economy Research Institute Working Papers*, no. 209, Warsaw, May 2000.
- Morita, T. (1999), 'The Hidden Growth Potential of EU Candidates', *Transition*, Vol. 10, No. 5, October, pp. 9-11.
- Mulewicz, J. (2001), 'Stąd do Brukseli', *Wprost*, 8 April 2001, p. 54.
- OECD (1996), *The Knowledge-Based Economy*, Paris.
- (2000), *Information Technology Outlook 2000*, Paris.
- (2001), *Science, Technology and Industry Scoreboard 2001: Towards a knowledge-based economy*, Paris.
- (2002), *Information Technology Outlook 2002*, Paris.
- Piech, K. (2001), 'Konkurencyjność polskiej gospodarki w dobie nowej gospodarki a wejście Polski do Unii Europejskiej', *Studia i Prace Kolegium Zarządzania i Finansów SGH*, vol. 22, pp. 17-40.
- (2002), 'Digitalism', in Piech, K. (ed.), *European Economy: Opportunities of Change*, The Knowledge Institute, Warsaw, pp. 62-70.
- (2002b), 'Just-in-time learning – konieczność doby rewolucji informacyjnej a polityka edukacyjna państw', in: Zbierzchowska, A. (ed.) (2002), *Kształcenie ustawiczne w warunkach globalizacji i społeczeństwa informacyjnego*, The Knowledge Institute, Warsaw, pp. 121-130.
- (2002c), 'Cykl koniunkturalny Polski a światowy cykl koniunkturalny – wnioski dla polskiej polityki stabilizacyjnej', in Piech, K. and Szczodrowski, G. (eds.) (2002), *Przemiany i perspektywy polskiej gospodarki w dobie integracji z gospodarką światową*, The Knowledge Institute, Warsaw 2002, pp. 141-156.
- Porter M., Sachs J., Warner A., Schwab K., Cornelius P.K., Levinson M. (2000), *The Global Competitiveness Report 2000*, Oxford University Press.
- Porwit, K. (2001), 'Przesłanki przyszłej ewolucji systemowej w Polsce', in: Porwit, K. and Kozłowski, P. (eds.) (2001), *Współczesne przemiany systemowe w Polsce. Ich czynniki sprawcze i perspektywy*, Instytut Nauk Ekonomicznych Polskiej Akademii Nauk, Warsaw.
- Sadowski, Z. (2001), 'Znaczenie polityki makroekonomicznej we współczesnej Polsce', in Piech, K. (ed.), *Przemiany i perspektywy polityki gospodarczej*, Polish Economic Association, Warsaw 2001.
- Schwartz, P. (1993), 'Post-Capitalist', *Wired*, Issue 1.03 – July/August 1993.
- Srholec, M. (2002), 'Technological change and evolutionary approach to the catching up process of transition economies', in: Piech K. (ed.) (2002), *European Economy: Opportunities of Change*, The Knowledge Institute, Warsaw, pp. 93-99.
- WEF (World Economic Forum) (2000), *From the Global Digital Divide to the Global Digital Opportunity*, 19 July, Tokyo.
- (2002). *Global Competitiveness Report 2001-2002*, Oxford University Press, Oxford.

WIFO: Specialisation and (Geographic) Concentration of European Manufacturing, (2000), Brussels, EC Enterprise Directorate-General.

World Bank (2000), *World Economic Indicators*.

The Visegrad Group and International Visegrad Fund – basic issues

The Visegrad Group reflects the efforts of the countries of the Central European region to work together in a number of fields of common interest within all-European integration. The Czech Republic, Hungary, Poland and Slovakia have always been part of one civilization sharing cultural and intellectual values and common roots of religious traditions, which they wish to preserve and strengthen further.

All the V4 countries aspire to becoming members of the European Union, perceiving their integration in the EU as another step forward in the process of overcoming artificial dividing lines in Europe through mutual support.

The V4 Group was not created as an alternative to all-European integration efforts nor does it try to compete with the existing functional Central European structures. Its activities are in no way aimed at isolation or the weakening of ties with the other countries. On the contrary, the Group aims at encouraging optimum cooperation with all countries, in particular its neighbours, its ultimate interest being the democratic development in all parts of Europe.

The V4 Group wishes to contribute towards building the European security architecture based on effective, functionally complementary and mutually reinforcing cooperation and coordination within existing European and transatlantic institutions.

In order to preserve and promote cultural cohesion, cooperation within the V-4 Group will enhance the imparting of values in the field of culture, education, science and exchange of information.

All the activities of the Visegrad Group are aimed at strengthening stability in the Central European region. The participating countries perceive their cooperation as a challenge and its success as the best proof of their ability to integrate also into such structures as e.g. the European Union.

The Visegrad Four is an unofficial name given to the four Central European post communist countries, the Czech Republic, the Republic of Hungary, the Republic of Poland and the Slovak Republic. Originally, the group was called the Visegrad Troika and the Four is the result of the split of the Czech and Slovak Federal Republics.

The name of this grouping was chosen during a meeting of the President of the ČSFR Václav Havel, the Prime Minister of Hungary, József Antall, and the President of Poland, Lech Walesa at an event held at the north Hungarian city of Visegrad on 15 February 1991. At this meeting the leaders signed a declaration on close cooperation of these three (today four) countries on their way to European integration.

In order to strengthen The Visegrad Group cooperation, the Governments of the Czech Republic, the Republic of Hungary, the Republic of Poland and the Slovak Republic have concluded the Agreement concerning establishment of the **International Visegrad Fund** signed on 9 June 2000 in Prague. It was done to support the development of closer cooperation and the strengthening of the integration of the Visegrad Group countries into the EU.



Index

A

Åkerman, Johan, 26
Albania, 229, 230, 234, 239, 245, 246, 247
Alesina, Alberto, 27
Amsterdam Treaty, 105, 108, 109
Argentina, 33, 86, 233, 267, 270
Armenia, 167, 230, 243, 245
Austria, 32, 33, 106, 107, 109, 128, 140, 159, 169, 171, 172, 174
Azerbaijan, 61, 229, 230, 245, 246, 247, 248

B

Balassa-Samuelson effect, 84, 88
Baltic States, 49, 75, 83, 84, 85, 86, 87, 88, 89
Bank for International Settlements, 183
Barro, Robert, 26, 127, 133, 242, 249, 259
Belarus, 81, 162, 169, 174, 230, 245
Belgium, 32, 33, 105, 106, 107, 109, 159, 169, 172, 174
Blaug, Mark, 5, 10, 244, 249
Bokros plan, 52, 271
Bosnia and Herzegovina, 229, 230, 246, 248
Brady's bonds, 187, 188, 189, 192
Brazil, 33, 188, 189, 233, 242, 267
Bretton Woods, 32, 33, 36, 40
Bulgaria, 41, 64, 70, 103, 106, 107, 109, 157, 230, 240, 245, 246, 274
business cycle, vii, 4, 25, 26, 27, 28, 35, 36, 41, 43, 45, 47, 51, 60, 96, 167, 168, 169, 170, 171, 174, 175, 195, 229, 233, 256, 278
European, 25
international, 25, 27
national, 25, 27
Polish, 167, 168, 171
political, 26, 27, 45
regional, 25, 27
world, 25, 29, 30, 36, 39, 40, 41

C

Canada, 25, 29, 30, 32, 33, 233, 272, 277
capital accumulation, 61, 235, 236

capital allocation, vii, 13, 15, 16, 17, 19, 20, 21, 22, 23
imperfect, 17, 20
inefficiency of, 23
perfect, 22, 23
catching-up, viii, 229, 230, 231, 236, 237, 239, 240, 247, 248, 253, 255, 258, 273, 278, 279
Central and East European countries, i, iii, v, vi, vii, viii, 11, 25, 41, 42, 43, 44, 45, 47, 48, 49, 50, 51, 54, 56, 57, 59, 67, 84, 85, 101, 113, 125, 128, 129, 131, 148, 157, 167, 168, 171, 213, 230, 233, 261, 269, 270, 271, 272, 274, 275, 278, 279, 280
Central and Eastern Europe, 59, 63, 81, 84, 85, 109, 133, 139, 152, 153, 155, 213, 215, 216, 241, 259
Central Europe, 63, 69, 72, 75, 81, 153, 218, 250
centrally-planned economy, 13, 18
Chelm voivodship, 196, 197, 198, 199, 200, 201, 202, 203, 204, 205, 209, 210
China, 33, 81, 152, 161, 233, 262, 267
Commons, John R., 4, 108
Community Initiative
EQUAL, 122
Community Initiatives, 117, 119, 120
Community of the Independent States, 75, 97, 178, 254
competitiveness, vi, viii, 96, 118, 137, 138, 139, 147, 148, 150, 151, 153, 154, 159, 179, 218, 229, 239, 245, 246, 252, 255, 259, 261, 262, 267, 270, 271, 272, 275, 278, 279, 280, 281, 282
convergence, v, vii, 47, 48, 50, 52, 55, 59, 61, 63, 66, 67, 69, 70, 71, 72, 73, 75, 76, 77, 79, 83, 84, 85, 86, 88, 91, 94, 97, 98, 125, 126, 127, 128, 129, 130, 131, 133, 253, 254, 261, 273, 274, 278
absolute, 125, 126, 127, 128
conditional, 127, 130, 131, 235
horizontal, 64
nominal, 83, 84, 85, 86, 98
real, vii, 83, 84, 85, 98, 273
vertical, 63

crisis, 26, 27, 28, 29, 30, 31, 36, 49, 51, 53, 54, 55, 84, 85, 88, 89, 90, 96, 168, 169, 173, 183, 195, 203, 213, 214, 269, 271
 banking, 86, 89, 271
 cinema, 206
 currency, 88, 262
 Czech, 55
 debt, 39, 183
 financial, 28, 29, 31, 38, 86, 183
 First Oil, 38
 global, 183
 national, 30, 37
 'reconversion', 36
 Russian, 38, 53, 54, 56, 86, 89, 147, 158, 174, 269
 Second Oil, 39
 The Great Depression, 26, 31, 33
 transformation, 204, 206
 Croatia, 64, 65, 70, 77, 79, 167, 230, 245, 246
 currency board, 86, 88, 89, 93, 95, 96, 97, 98, 100
 current accounts, 52, 83, 84, 86, 87, 88, 90, 137, 143, 146, 147, 148, 150, 183
 Cyprus, 64, 103, 104, 105, 106, 107, 109, 157, 274
 Czech Republic, v, vii, ix, x, 41, 47, 48, 49, 50, 51, 52, 53, 54, 55, 64, 65, 66, 70, 71, 75, 79, 80, 103, 104, 105, 106, 107, 109, 125, 126, 130, 131, 133, 142, 157, 169, 172, 173, 174, 175, 177, 213, 214, 215, 216, 219, 220, 221, 222, 225, 229, 230, 233, 235, 242, 245, 246, 247, 248, 254, 256, 257, 258, 270, 271, 273, 274, 275, 276, 285
 Czechoslovakia, 33, 50, 64, 153, 169, 171, 173, 177

D

debt, vii, ix, 39, 85, 87, 88, 89, 90, 146, 147, 148, 161, 183, 184, 185, 186, 187, 188, 189, 190, 191, 192, 193
 Denmark, 29, 30, 32, 33, 63, 67, 68, 106, 107, 109, 169, 171, 172, 174, 272
 digitalism, 261, 265, 278, 279, 280
 Drucker, Peter, 7, 10, 261, 264, 281

E

EBRD. *See* European Bank for Reconstruction and Development

Eco-Fund, 186, 187
 Economic and Monetary Union, 55, 83, 93, 94, 95, 98, 99, 100, 161
 economic development, viii, 7, 36, 47, 48, 50, 51, 54, 55, 59, 75, 103, 157, 162, 180, 182, 183, 185, 195, 230, 247, 261, 262, 264, 266, 275, 276, 279, 280
 economic growth, 7, 8, 13, 19, 20, 21, 22, 23, 27, 41, 42, 52, 55, 61, 64, 75, 79, 84, 87, 113, 125, 126, 135, 170, 171, 178, 179, 181, 195, 213, 214, 217, 223, 229, 230, 231, 232, 234, 235, 236, 237, 238, 239, 240, 241, 242, 243, 244, 246, 248, 254, 261, 262, 263, 266, 269, 272, 277, 278, 279
 factors, 8
 long-term, 239
 theory of, 7
 economic system, 6, 7, 17, 69, 170, 199, 256, 262, 265, 276
 education, 7, 8, 61, 69, 115, 118, 119, 122, 130, 137, 146, 158, 203, 207, 210, 234, 242, 243, 277, 278, 280, 285
 employment, vii, 13, 15, 18, 44, 59, 60, 61, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 79, 113, 114, 116, 117, 118, 119, 120, 122, 141, 142, 144, 159, 160, 243, 264, 269, 280
 entrepreneurship, ix, 122, 231, 238, 241, 244, 250, 261, 264, 267, 279
 ESF. *See* European Social Fund
 Estonia, v, 41, 47, 49, 50, 51, 52, 53, 54, 61, 63, 64, 65, 70, 71, 75, 79, 83, 86, 87, 88, 89, 90, 91, 93, 95, 96, 97, 98, 99, 103, 104, 105, 106, 107, 109, 157, 167, 229, 230, 235, 245, 246, 247, 248, 269, 271, 273, 274, 275, 276, 277
 EU. *See* European Union
 Eurobonds, 187, 188, 189, 190, 191, 192
 European Bank for Reconstruction and Development, 59, 61, 66, 77, 78, 80, 142, 152, 238, 244, 249, 274, 281
 European Commission, 85, 103, 104, 114, 124, 127, 128, 133, 160, 163, 221, 222, 281
 European Council, 93, 94, 98, 100, 103, 117, 120, 121, 122, 179
 European Court of Justice, 103
 European Investment Fund, 222
 European Parliament, 103, 108, 109

European Social Fund, v, 113, 114, 115, 117, 121, 122, 124
 European Union, v, vi, vii, x, 41, 47, 49, 50, 54, 55, 56, 59, 63, 64, 66, 67, 68, 69, 70, 72, 77, 79, 83, 85, 86, 93, 94, 97, 98, 99, 100, 101, 103, 104, 105, 106, 107, 108, 109, 110, 111, 113, 118, 121, 123, 125, 126, 127, 128, 129, 130, 131, 133, 135, 136, 137, 139, 140, 143, 147, 149, 157, 158, 159, 160, 161, 162, 163, 174, 175, 179, 192, 213, 214, 216, 218, 219, 220, 221, 222, 223, 225, 226, 237, 240, 244, 248, 253, 254, 256, 261, 273, 274, 276, 278, 279, 280, 281, 282, 285
 excessive capital goods, 14, 18, 23
 excessive capital stock, 14, 15
 excessive employment, 13, 14, 15, 17, 18, 23, 66, 75
 exchange rate
 regime, 45, 83, 84, 85, 86, 88, 91, 93, 94, 96, 97, 98, 100, 149
 risk, 86

F

Finland, 29, 30, 32, 106, 107, 109, 128, 142, 167, 169, 172, 174, 186, 232, 233, 237, 272, 275
 foreign direct investment, 87, 88, 97, 130, 131, 142, 143, 242, 258, 262, 266, 269, 275, 276, 279
 FR Yugoslavia, 230, 246, 247, 248
 France, 28, 29, 30, 31, 32, 33, 104, 105, 106, 107, 109, 159, 169, 170, 172, 174, 186, 189, 232, 241, 272, 276
 Friedman, Milton, 26, 44, 81

G

Galbraith, John K., 7, 10
 Georgia, 167, 229, 230, 245, 246, 247
 Germany, 7, 29, 30, 31, 32, 33, 36, 41, 50, 52, 53, 54, 67, 69, 104, 105, 106, 107, 108, 109, 113, 139, 140, 143, 157, 159, 161, 169, 170, 172, 173, 174, 232, 256, 257, 263, 267, 272, 276, 277
 Great Britain. *See* United Kingdom
 Greece, 62, 63, 66, 67, 70, 71, 72, 75, 106, 107, 109, 125, 126, 129, 130, 131, 270, 271, 274, 276
 growth
 cycle, 28, 36, 167

long-term, 8, 247, 248
 short-term, 7
 sustained, 253, 254

H

Hodrick-Prescott Filter, 26, 38, 39, 40, 169, 171, 172, 173, 174
 HP Filter. *See* Hodrick-Prescott Filter
 human capital, 7, 61, 72, 118, 126, 130, 131, 181, 231, 234, 236, 238, 242, 248, 255, 277
 Hungary, ix, 41, 47, 48, 49, 50, 51, 52, 54, 55, 61, 63, 64, 65, 70, 71, 72, 75, 76, 77, 79, 103, 104, 105, 106, 107, 109, 142, 152, 153, 155, 157, 169, 172, 173, 174, 175, 177, 213, 214, 216, 229, 230, 233, 235, 242, 245, 246, 247, 248, 254, 256, 257, 258, 269, 270, 271, 273, 274, 275, 276, 285
 hyperinflation, 86, 148, 149

I

ICT. *See* technology: information and communication
 IMF. *See* International Monetary Fund
 insurance, vii, ix, 8, 144, 145, 158, 213, 214, 215, 216, 217, 223
 International Monetary Fund, 27, 30, 32, 33, 34, 35, 36, 37, 38, 39, 41, 42, 43, 44, 47, 48, 49, 52, 57, 80, 86, 87, 90, 137, 152, 154, 167, 169, 176, 183, 184, 185, 238, 250, 268, 269, 272, 281
 International Visegrad Fund, vi, vii, 56, 285
 Internet, 210, 223, 225, 229, 231, 233, 234, 235, 237, 239, 240, 244, 250, 263, 279
 investment, 18, 19, 20, 21, 22, 23, 41, 49, 51, 60, 85, 96, 97, 116, 118, 130, 131, 135, 139, 141, 142, 143, 146, 147, 150, 151, 152, 157, 158, 161, 185, 208, 223, 232, 233, 236, 241, 242, 248, 256, 266, 267, 269, 275, 277, 280
 Iran, 33
 Ireland, 66, 106, 107, 109, 125, 126, 129, 130, 131, 136, 232, 237, 256, 257, 267, 269, 272, 276
 IT. *See* technology: information
 Italy, 29, 30, 32, 33, 67, 104, 105, 106, 107, 109, 113, 140, 169, 170, 172, 174, 187, 232, 276

J

Japan, 29, 30, 32, 33, 142, 195, 232, 241, 256, 267

Jevons, Stanley, 26

job creation, 71, 73, 74, 75, 76, 79

job destruction, 71, 73, 74, 75, 79

Juglar, Clément, 26, 36, 40

K

Kaja, Jan, iv, viii, 3, 9, 10, 135, 153

Kaliningrad, 161

Kazakhstan, 230, 239, 245, 246

Keynes, John M., 26, 195

Kindleberger, Charles P., 28, 44

Kirgistan, 61

Kitchin, Joseph, 26

knowledge, viii, 41, 116, 122, 151, 229, 230, 235, 237, 240, 241, 242, 243, 244, 246, 254, 255, 256, 261, 262, 263, 264, 265, 269, 278, 279, 280, 282

knowledge-based economy, 261, 264

Kołodko, Grzegorz, ix, 25, 135, 137, 142, 153, 231, 236, 250

Kondratiev, Nikolai, 26

Korea, 142, 232, 241, 242, 267

Krugman, Paul, 237, 251

Kuznets, Simon, 26

Kydland, Finn, 26, 44

L

Latvia, v, 41, 43, 47, 49, 50, 51, 52, 54, 64, 65, 70, 83, 86, 87, 88, 89, 90, 91, 93, 95, 96, 97, 98, 99, 100, 103, 105, 106, 107, 109, 157, 167, 230, 245, 246, 269, 274, 275, 276, 277

Lithuania, v, 41, 43, 47, 49, 50, 52, 53, 54, 64, 70, 83, 86, 87, 89, 90, 93, 95, 96, 97, 98, 99, 100, 103, 106, 107, 109, 157, 161, 162, 167, 169, 174, 230, 245, 246, 274

London Club, 184

Lucas, Robert, 26

Luxembourg, 106, 107

M

Maastricht, 55, 86, 97, 98, 117

Malta, 64, 103, 104, 105, 106, 107, 109, 157, 274

market economy, 13, 19, 23, 47, 50, 89, 129, 157, 158, 179, 180, 207, 230, 236, 247, 263, 274, 280

Mečiar's government, 52

Mendelson, Lev, 28, 29, 44

Mexico, 27, 33, 142, 185

Mill, John Stuart, 261

Mitchell, Wesley C., 4, 11

Moldova, 61, 230, 245

N

National Bank of Poland, ix, 141, 149, 150, 154, 161, 186, 188, 189, 191, 194

National Bureau of Economic Research, 27, 29, 30, 31, 45, 91, 154, 250

NBER. *See* National Bureau of Economic Research

NBP. *See* National Bank of Poland

NEI. *See* New Economy Indicator

Netherlands, 30, 32, 33, 63, 67, 105, 169, 171, 173, 174, 272

new economy, 229, 230, 231, 232, 233, 234, 235, 236, 237, 238, 239, 240, 241, 242, 243, 244, 246, 247, 248, 265

New Economy Indicator, 229, 231, 237, 244, 245, 246, 247, 248

North, Douglass, 5, 6, 7

Norway, x, 29, 30, 32, 169, 172, 174, 187, 272

O

OECD. *See* Organisation for Economic Co-operation and Development

Okoń-Horodyńska, Ewa, 6, 7, 11

Organisation for Economic Co-operation and Development, 137, 142, 154, 160, 232, 233, 238, 241, 242, 243, 249, 251, 256, 257, 259, 264, 276, 282

P

Paris Club, 183, 186, 188, 192

Piech, Krzysztof, iii, v, vi, viii, x, 3, 11, 25, 41, 44, 45, 55, 57, 167, 168, 176, 195, 211, 261, 265, 277, 278, 282

Poland, iv, vi, vii, ix, x, 33, 41, 43, 47, 49, 50, 51, 52, 53, 54, 55, 61, 63, 64, 65, 66, 67, 70, 71, 72, 75, 79, 81, 95, 103, 104, 105, 106, 107, 109, 113, 135, 136, 137, 138, 139, 140, 142, 143, 146, 147, 148, 149, 151, 152, 153, 154, 155, 157, 158,

159, 160, 161, 162, 163, 167, 168, 169, 170, 171, 172, 173, 174, 175, 177, 183, 184, 186, 187, 188, 189, 190, 191, 192, 193, 195, 196, 197, 199, 203, 204, 206, 207, 209, 210, 213, 214, 215, 216, 217, 229, 230, 233, 234, 235, 236, 239, 241, 242, 245, 246, 247, 248, 249, 254, 256, 257, 258, 270, 271, 272, 273, 274, 275, 276, 277, 278, 279, 280, 281, 285

policy, 55, 84, 88, 96, 98, 124, 126, 142, 148, 149, 177, 214, 235, 274, 277, 280

agricultural, 159, 219

budgetary, 177

competition, 77, 218, 238, 266, 267, 269, 274, 275, 276, 279, 281

credit, 178

customs, 277

economic, vii, viii, 3, 6, 7, 8, 9, 18, 27, 47, 51, 52, 53, 55, 94, 99, 148, 158, 171, 177, 178, 179, 180, 181, 206, 219, 221, 248, 261, 266, 269, 275, 276, 277, 279, 280

education, 277

environmental, 161

exchange rate, 85, 93, 95, 147

financial, 96, 180, 181

fiscal, 27, 86, 98, 99, 141, 146, 149, 178, 277

incomes, 149

industrial, 277, 278, 279

labour market, 122

macroeconomic, 158, 180, 181

marketing, 213

monetary, 41, 52, 53, 95, 96, 135, 147, 149, 177, 180, 279

pro-competitive, 267, 277, 278

R&D, 280

regional, vii, 219, 220, 221, 222

social, 196, 220

stabilisation, 33

structural, 115, 116, 121, 122, 123

technological, 261

vocational training, 114

Polszakiewicz, Barbara, 25, 29, 36, 45

Portugal, 30, 62, 63, 66, 67, 70, 71, 72, 106, 107, 109, 125, 126, 129, 130, 131, 136, 160, 262, 270, 271, 274

Prescott, Edward, 26, 38, 44, 169, 176

privatisation, 50, 77, 79, 88, 135, 158, 179, 189, 193, 197, 244, 253

production function, 13, 14, 15, 16, 17, 19, 21, 22, 127

productivity, 60, 61, 66, 75, 84, 97, 136, 143, 147, 149, 150, 151, 230, 231, 232, 234, 235, 236, 237, 240, 242, 243, 244, 247, 261, 277, 279

Q

Quah, Danny, 235, 243, 251

R

R&D, 7, 231, 234, 235, 238, 240, 241, 242, 245, 249, 250, 251, 279, 280

expenditure, 7, 8, 231, 238, 240, 241, 242, 245

Rebelo, Sérgio, 26

recession, 25, 26, 27, 28, 29, 30, 31, 32, 33, 36, 37, 38, 39, 40, 41, 42, 53, 64, 150, 178, 183, 195, 233, 262, 271, 278, 279

world, vii, 25, 28, 29, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 174, 183, 262

regional development, 114, 115, 116, 219, 222

research and development. *See* R&D

restructuring, 23, 59, 63, 64, 66, 69, 70, 71, 72, 74, 75, 76, 77, 78, 79, 113, 115, 121, 130, 159, 178, 179, 180, 181, 183, 185, 197, 225, 255

Ricardo, David, 261, 262, 276

Romania, 33, 41, 43, 61, 63, 64, 65, 66, 70, 71, 75, 77, 79, 103, 105, 106, 107, 109, 157, 230, 245, 246, 274

Russia, 28, 29, 31, 41, 47, 49, 50, 51, 52, 53, 54, 61, 62, 63, 64, 79, 81, 87, 89, 96, 139, 152, 161, 169, 174, 206, 230, 245, 246, 263, 270, 275, 276

S

Sachs, Jeffrey, 147, 154, 237, 239, 252, 272, 279, 282

school of economic thought

classical, 4

German Historical School, 4

heterodox, 3, 4, 9

institutional, 4

Keynesian, 7, 33

neo-classical, 3, 4, 5, 6, 7, 125, 237

New Institutionalism, 5, 6

Real Business Cycle School, 38

- Schumpeter, Joseph, 26, 240, 244, 250, 251, 261
- Schwartz, Anna, 26, 44, 136, 154, 264, 282
- sector
- agricultural, 66, 67, 140, 159, 265
 - financial, 61, 99, 143, 213, 240
 - industrial, 265
 - non-tradable, 84
 - service, 59, 63, 64, 66, 67, 70, 79, 145, 265
 - tradable, 84
- Slovakia, vi, vii, x, 41, 43, 47, 48, 49, 50, 51, 52, 53, 54, 55, 64, 65, 70, 71, 75, 79, 103, 105, 106, 107, 109, 157, 167, 169, 171, 172, 173, 174, 175, 177, 178, 179, 180, 181, 182, 213, 214, 215, 216, 220, 229, 230, 233, 235, 242, 245, 246, 247, 254, 257, 258, 273, 274, 276, 285
- Slovenia, 41, 64, 65, 66, 70, 71, 75, 103, 104, 105, 106, 107, 109, 157, 213, 214, 215, 216, 229, 230, 235, 240, 245, 246, 247, 248, 257, 269, 270, 271, 273, 274, 276
- small and medium enterprise, vi, vii, 115, 219, 222, 223, 224, 225
- Smith, Adam, 3, 7, 11, 139, 154, 190, 241, 250, 261
- Solow, Robert, 126, 235, 252, 261, 263
- Soviet Union, 33, 61, 64, 86, 89, 270
- Spain, 30, 33, 63, 66, 67, 70, 71, 75, 104, 105, 106, 107, 109, 125, 126, 129, 130, 131, 160, 169, 172, 174, 270, 274, 276
- Stabilitätsgesetz, 7
- structural change, 59, 60, 64, 71, 75, 79, 139, 254, 255, 256
- Structural Funds, 117, 118, 120, 121, 122, 124
- Sweden, 28, 29, 30, 32, 33, 106, 107, 109, 128, 136, 169, 171, 172, 174, 187, 232, 233, 237, 241, 242, 263, 272
- Switzerland, 30, 32, 33, 186, 272
- synchronisation, vi, vii, 25, 29, 30, 32, 33, 36, 37, 41, 43, 45, 47, 56, 57, 98, 167, 168, 170, 171, 174, 175
- apparent, 168
- T**
- Tajikistan, 230, 234, 243, 245, 247, 248
- technology, viii, 6, 7, 15, 119, 126, 127, 130, 131, 229, 231, 241, 242, 243, 247, 254, 255, 256, 257, 258, 263, 264, 265, 266, 279
- high-, 234, 278
 - information, 225, 233, 235
 - information and communication, 229, 231, 232, 233, 234, 235, 241, 242, 243, 244, 248
 - new, 15, 16, 18, 23, 115, 118, 130, 136, 230, 231, 235, 236, 237, 239, 241, 243, 246, 247, 254, 255, 256, 262, 263, 266, 269, 279
- Telekomunikacja Polska S.A., 189, 191, 204
- total factor productivity, 235, 236
- transaction costs, 5, 9, 18, 19, 239, 278
- transition, vii, 13, 17, 18, 19, 23, 36, 41, 42, 47, 49, 51, 52, 53, 55, 59, 61, 63, 64, 66, 75, 76, 77, 78, 79, 81, 91, 98, 100, 103, 125, 129, 131, 135, 137, 139, 146, 147, 148, 149, 150, 152, 158, 168, 171, 174, 175, 177, 178, 179, 180, 181, 195, 197, 206, 229, 230, 231, 233, 234, 235, 236, 237, 238, 239, 240, 241, 242, 244, 246, 247, 248, 253, 254, 255, 256, 257, 259, 266, 269, 271, 273, 274, 276, 277, 279, 280, 281, 282
- transition economy, vii, 13, 17, 18, 19, 23, 41, 42, 43, 79, 91, 135, 158, 195, 229, 230, 231, 233, 234, 235, 236, 238, 239, 240, 241, 242, 244, 246, 247, 248, 253, 254, 255, 256, 257, 259, 276, 281, 282
- Treaty of Nice, 104, 109, 111
- Turkey, 33, 63, 64, 157, 270
- Turkmenistan, 230, 245
- U**
- Ukraine, 61, 62, 63, 64, 79, 162, 169, 174, 230, 242, 245, 246, 276
- unemployment, 51, 59, 60, 65, 72, 75, 76, 79, 86, 88, 113, 114, 115, 116, 117, 118, 120, 121, 144, 146, 150, 158, 177, 179, 196, 213, 221, 229, 232, 243, 269
- long-term, 115, 118, 122
- United Kingdom, iv, 29, 30, 31, 32, 36, 55, 63, 67, 68, 104, 105, 106, 107, 108, 109, 133, 167, 169, 171, 172, 173, 174, 175, 226, 233, 241, 262, 272, 276
- United States, 25, 26, 28, 29, 30, 31, 32, 33, 36, 44, 49, 55, 56, 96, 97, 147, 167, 169, 171, 172, 173, 174, 175, 183, 184,

185, 186, 187, 188, 189, 190, 191, 192,
196, 200, 201, 202, 203, 204, 205, 211,
215, 216, 231, 232, 233, 235, 237, 241,
242, 244, 267, 272, 277
Uzbekistan, 81, 229, 230, 245, 246, 247

V

Vaubel's hypothesis, 27
Veblen, Thorsten, 4, 12
Velvet Revolution, 125

Visegrad, iv, vi, vii, viii, 56, 79, 149, 165,
175, 213, 214, 215, 216, 217, 253, 261,
270, 285
vocational training, 113, 114, 115, 116,
118, 120

W

World Bank, 77, 126, 130, 133, 152, 153,
154, 155, 178, 182, 184, 237, 238, 252,
259, 269, 283
world economy, 25, 29, 33, 40, 42, 180,
217, 265, 269

